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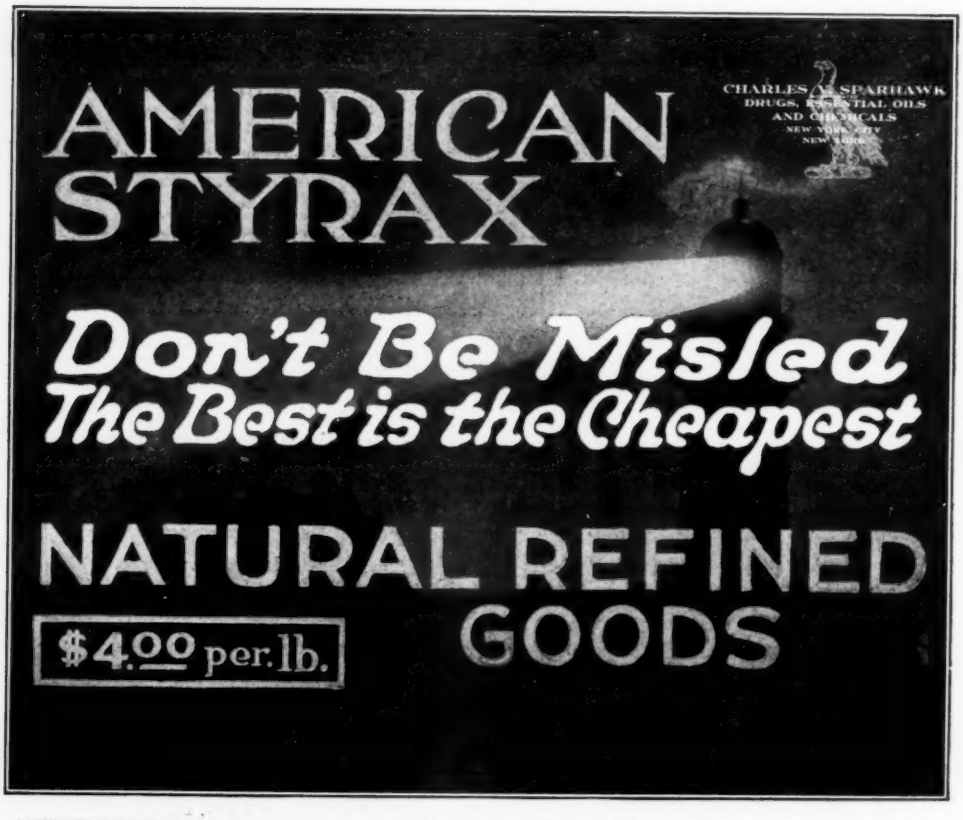

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CHARLES B. JORDAN

LAFAYETTE, IND.

President of the American Conference of Pharmaceutical Faculties, 1918–1919

C. B. JORDAN

JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

VOL. VIII MARCH, 1919 NO. 3

CHARLES BERNARD JORDAN.

Charles Bernard Jordan, president of the American Conference of Pharmaceutical Faculties, was born on a farm near Morrice, Michigan, November 7, 1878. He completed the eighth grade in the country schools and then entered the Morrice high school from which he graduated in 1897. For the several years following he taught in the country schools and in the grades at Morrice. In 1904, he graduated from the Ypsilanti State Normal College and was Superintendent of Schools until 1908.

During the years he was a high school student, and later a teacher, at Morrice, he gained practical experience in the drug store of W. A. Conley. In September 1908 he entered the University of Michigan School of Pharmacy. He received the degrees of Pharmaceutical Chemist and Bachelor of Science from this institution in June 1910. He received the degree of M.S. from this school in September 1912.

In September 1910 he was made director of Purdue University School of Pharmacy, which position he still holds.

Professor Jordan is a tireless worker and always takes an active part in state and national pharmaceutical meetings. He has been a member of the Indiana State Pharmaceutical Association since 1910. He was secretary of the Section on Education and Legislation of the American Pharmaceutical Association in 1916–1917, and chairman of the same Section in 1917–1918. Each year he has contributed to the programs of the associations and has held many important committee appointments. He has worked unceasingly for higher educational standards for pharmacy. At the meeting of the Indiana Pharmaceutical Association in 1912, he introduced the subject of prerequisite legislation, at which time only four or five approved. The same Association unanimously approved prerequisite legislation at its 1918 meeting.

Besides being an active member of the Indiana Pharmaceutical Association and the American Pharmaceutical Association, Professor Jordan is a member of the American Chemical Society and the Indiana Academy of Science. In addition to contributing to the programs of these associations he has written many papers which appear in the leading pharmacy journals on the educational problems of pharmacy. The chief aim and object in all his work is to raise pharmacy to a plane of high professional standard.

CHAS. O. LEE.

EDITORIAL

E. G. EBERLE, Editor 253 Bourse Bldg., PHILADELPHIA

PROHIBITION LEGISLATION AND THE DRUG BUSINESS.

IN nearly all States legislative bills relating to the sale of alcoholic preparations are pending. Quite a number of the proposed measures, and some that have already been enacted into laws, have a direct bearing on the drug business. The fact that those engaged in the business to be regulated are law-abiding citizens and desirous of legislation which will promote better citizenship is not infrequently ignored by legislators. Intentionally, or otherwise, legislators do not discuss proposed legislation with those affected by it, and in many instances the latter are not informed relative to the text of bills until they appear in print. Even though these bills are killed they take the time of the legislature and involve expenditures on the part of the State and interested citizens. There is now more need than ever for an advisory body, composed of representative business and professional men, to whom proposed legislation should be referred for careful study. If the regulation is necessary, then the bill should be carefully prepared by such commission for final action by the legislators.

The following bill has found place on the calendar of the Idaho Legislature:

> "It shall be unlawful for any pharmacist, druggist, apothecary, merchant, trader, peddler, or any other person, male or female, in this state with or without license to sell by wholesale or retail, or to give away, directly or indirectly, or to have in his or her possession any patent medicine or other medicine compound or mixture which contains in excess of 2 percent of alcohol."

Violation is made a felony, subject to penitentiary imprisonment of not less than one year nor more than two.

A California bill provides for the use of ethyl alcohol in the manufacture of non-drinkable preparations, but no provision is made therein for the sale of preparations containing alcohol.

The measure which has been approved by the House Judiciary Committee, defining "beer, wine or other intoxicating malt or vinous liquors" as any liquor which contains more than one-half of one percent of alcohol, applies to the war prohibition act which becomes effective July 1st, and is not subject to controversy with State law save as the constitutionality of the original act shall be attacked successfully.

The state laws differ on the alcoholic content in their prohibition laws. West Virginia draws the line below one-half of one percent alcohol content; in Alabama, South Dakota and Maryland any beverage containing alcohol is declared intoxi-

cating; Michigan bars liquors "of intoxicating properties;" the North Carolina law specifies liquors that "will produce intoxication," leaving the decision of such condition to court; the Texas law practically conforms to the latter, while in Maine the basis of alcohol content is "not over three percent." The "dry" leaders contend that the States have no right under the prohibition amendment to attempt to define an intoxicating liquor, while the opposition holds that each State can give its own definition of an intoxicating drink.

We are concerned in the exemption clause pertaining to the sale of alcohol-containing preparations. The wording of this clause should be uniform, and to that end Chairman George W. Lattimer, of the N. W. D. A. Committee on Legislation, suggests that of the Arizona law, which reads:

> "Provided, also, that nothing herein shall prevent the manufacture and sale of such preparations as flavoring extracts, essences, tinctures, perfumes or remedies containing drugs or medicines which do not contain more alcohol than is necessary for legitimate purposes of extraction, solution or preservation, and which contain drugs in sufficient quantity to medicate such compounds, and which are sold for legitimate and lawful purposes, and not as beverages."

E. G. E.

THE SEPARATION OF DISPENSING FROM PRESCRIBING.

THE dispensing and prescribing of medicines are different and not interchangeable functions. True it is that many physicians prescribe and dispense, and while under certain conditions this may be allowable and necessary, as a general practice it should not be permitted, for reasons that have been frequently presented. The question has often been discussed in connection with the dispensing of narcotics, and now that regulations are being perfected for controlling the sale of medicines employed in the treatment of venereal diseases it is again a topic for discussions.

When the Venereal Disease Act was before the British Parliament the British Pharmaceutical Society sought to have the officinal dispensing of venereal remedies on physicians' prescriptions reserved exclusively to pharmacists, but the medical profession, as represented by the British Medical Association, refused to give up this part of its dispensing practice. The attitude of doctors in this country is not so different. The contention is, and rightly, that pharmacists should advance their educational standards, but how much pharmacy is taught in medical schools? While medical men may not be willing to admit that it is just as wrong for the members of their profession to dispense medicines as for pharmacists to prescribe, they can not reasonably contend that they, without special training and education in pharmacy, are qualified for pharmaceutical work.

The progress of medicine is in a degree dependent upon that of pharmacy, and every encouragement should be given to advance it; there should be hearty and sincere coöperation between the two professions. The right of pharmacists to dispense should be as firmly established as that of doctors to prescribe.

In the latter connection we desire again to refer to the discontinuance of sales by druggists of remedies for venereal diseases. This is right and proper, but the prescribing of such medicines is equal in importance to the prescribing of narcotics. It is true that physicians as a class are honorable men, and the same is true of pharmacists. That the medical profession is not free from charlatans will be admitted, and those who doubt this will be convinced by reading the report of Francis W. Shepardson, Director of Registration and Education for Illinois, on the status of the medical profession in that State, recently printed in the *Journal of the A. M. A.* Under the existing conditions it will be evident that there are opportunities for imposition and that there are those who will take full advantage of them.

It seems to us that the medical men, as represented by the Medical Associations, should not only favor the discontinuance of dispensing by physicians but seek in every possible way to effect a separation of dispensing and prescribing as distinct and not interchangeable functions. It will help the advancement of both professions and thereby benefit the public.

There should be morale in professions and among professions. A recent definition given for the word "morale" is "belief in one another." In that sense it means that the votaries of the same and related professions believe in each other, and, to carry the thought further, those who are engaged in related professions believe that coöperatively they can and will do better work. It is applied serviceable friendship of those coöperating, and for those served—the public.

E. G. E.

THE NEXT PHARMACOPOEIA.

The following letter to pharmacists has been issued by Chairman C. H. LaWall of the Committee of Revision of the United States Pharmacopoeia. All pharmacists are invited to assist by offering suggestions for the next revision. A separate sheet is to be used for each subject discussed, giving first the title of the subject, then a brief abstract of recommendation, the details and reasons for proposal. The address of the Chairman is 39 So. 10th street, Philadelphia, Pa. The letter follows:

"May, 1920, only a little more than a year hence, will again witness the assembling in Washington of the delegates to the United States Pharmacopoeial Convention. This fact should stimulate pre-convention activity on the part of those who have had experience with the present revision and are prepared to suggest improvements for a new edition.

"It is desirable at this time that pharmacists, physicians, chemists, botanists, biological experts, or any others who use the U. S. P. IX should submit to the Chairman of the Revision Committee, either personally or through associations, such helpful information as their experience may have suggested, or which may have come to their attention.

"These suggestions will be compiled systematically and circularized to the present Revision Committee, the authors being credited in each instance with the recommendations, and the compilation will be submitted to the 1920 Convention for the benefit of the new Committee of Revision. (Signed) CHARLES H. LAWALL."

PHYTOCHEMICAL NOTES.[1]

83. The Volatile Oil of Canada Balsam.[2]

BY MAX PHILLIPS.[3]

Although Canada balsam is one of the early contributions made by America to the materia medica, the chemistry of this substance is but little understood. Of the two products into which this drug resolves itself upon steam distillation, the volatile oil has yielded but one of its constituents, namely, *l*-pinene.

Inasmuch as the occasion had arisen to prepare a larger amount of *l*-pinene for certain experiments with this hydrocarbon, 15.9 K. of commercial Canada balsam were subjected to steam distillation. 3725 grammes of oil resulted, corresponding to a yield of 23.4 percent. With the oil there came over a flocculent substance which was removed by filtration. The residue remaining in the still was a hard, yellow resin.

The density of the oil at 20° C. was 0.8472; $[\alpha]_{D20}$ —27.8°; n_{D20} 1.4718. These constants, with the exception of the density, come within the limits of those previously observed.

The oil was then fractionated. In order to prevent unnecessary decomposition, amounts of 500 Cc. were distilled in an ordinary fractionating flask at a fairly rapid rate. In no case was much more than one-half hour consumed to bring about the first rough separation. The last lot amounted to but 190 Cc. The following table records the amounts obtained in each fraction, also the time consumed in each operation:

—153°.	153–158°.	158–163°.	163–168°.	168–173°.	173–178°.	178–183°.	Residue.	Time.
				Vol. in Cc.				
9 Cc.	16 Cc.	26.8 Cc.	190 Cc.	142 Cc.	47.5 Cc.	28.8 Cc.	49 Cc.	32 m.
6	6	18	167	164	58	28	55	38
6.2	4	18	175	165	54.5	31	50	26
5.6	3.5	30	175	157	52	29	52	36
6.2	5.4	25.2	200	142	53	25	49	26
6	4.6	30.6	200	133	55	30	46	30
5	4.6	33.4	190	137	55	27	49	32
6.6	5	41	190	137	51	27	49	29
4	4	25.4	110.6	80	26	13.8	28	17

Although the oil is reported to contain about 50 percent of pinene, the above table reveals but a small total in fraction 153–158°. The residue had a decided limonene odor. That decomposition had taken place became apparent, not only from the vapors formed at temperatures above 175°, but also from the yellow resinous character of the residue, although distillation had been interrupted at 183° C.

A refractionation with a column of three bulbs was undertaken. That there was an appreciable lowering, in part at least, of the boiling point, becomes apparent from the data recorded in the following table:

---

[1] From the laboratory of Edward Kremers.

[2] Read before Scientific Section, A. Ph. A., Chicago meeting, 1918.

[3] Fritzsche Bros. Fellow.

Original fraction.	—153°.	153°+.						
—153°	8.2 Cc.	43 Cc.						
		153–8°.	158°+.					
153–158°	3.8 Cc.	6 Cc.	77 Cc.					
			158–63°.	163°+.				
158–163°	8 Cc.	8.2	143 Cc.	143				
				163–8°.	168°+.			
163–168°	4.4 Cc.	11.2	516 Cc.	839 Cc.	372 Cc.			
					168–73°.	173°+.		
168–173	0	4.6	44.4 Cc.	810 Cc.	435 Cc.	296		
						173–8°.	178°+.	
173–178	0	0	0	13 Cc.	343 Cc.	163 Cc.	218	
							178–83°.	183°+.
178–183	0	0	1 Cc.	5.6 Cc.	46 Cc.	140 Cc.	63 Cc.	190 Cc.

The specific gravity and angle of rotation of the respective fractions are recorded in the next table.

	—153°.	153–8°.	158–63°.	163–8°.	168–73°.	173–8°.	178–83°.
Sp. gr. at 20°	0.819	0.838	0.852	0.853	0.853	0.848	0.842
Optical rotation in 1 dcm. tube	17.03	—22.54	—23.54	—25.56	—27.83	—28.21	—28.02

The residue, that is, the material which had boiled above 183° C. in the first fractionation, was distilled under a pressure of only 38 mm. The following table contains a list of the various fractions obtained together with the sp. gr. of each:

Fractions.									
—75°.	75–95°.	95–105°.	105–15°.	115–25°.	125–35°.	135–45°.	145–55°.	155–65°.	Residue.
Vol. in Cc.									
39.5	100	132	47.5	27	46	35	45	26.6	42 g.
Sp. Gr. at 20° C.									
0.844	0.847	0.837	0.832	0.833	0.837	0.847	0.862	0.893	

PREPARATION OF NITROSOCHLORIDES.

Nitrosochlorides were prepared from some of the fractions given below according to the method of Wallach for the preparation of pinene nitrosochloride. For each preparation 29.5 Cc. of oil were used. The results obtained are tabulated below.

Fraction.	Wt. of nitrosochloride.	Yield.	Rotation of oil.
158–163	2.32 Gm.	9.2 percent	—23.54
163–168	1.62 Gm.	6.4 percent	—25.51
168–173	0.71 Gm.	2.8 percent	—27.83
173–178	0.14 Gm.	0.55 percent	—28.21

The amount obtained diminished in accordance with the well known rule that the yield of optically active pinene nitrosochloride diminishes as the angle of rotation of the pinene increases. In this case, however, the diminution in the yield is out of all proportion to the slight increase in the angle of rotation and must, no doubt, be attributed in part to other causes.

CONVERSION OF NITROSOCHLORIDES TO BENZYLAMINE AND PIPERIDENE BASES AND TO NITROSOPINENE.

The nitrosochloride obtained from fraction 153–163 was converted to nitrosopinene. (Heusler-Pond, p. 43.) The purified compound melted at 132° C. (m. p. of nitrosopinene = 132° C. Heusler-Pond).

From the nitrosochloride of fraction 163–168° the nitrolbenzylamine base was prepared, according to the method given in Heusler-Pond p. 43. It melted at 122° C. (m. p. of nitrolbenzylamine base of pinene = 122° C.).

The nitrosochloride of fraction 168–173° was converted to the nitrolpiperidide base. The pure compound melted at 118° C. (m. p. of nitrolpiperidide of pinene is 118–119° C.).

From the nitrosochloride of fraction 173–178° a nitrolbenzylamine base was prepared. It was found to melt rather low. The compound was recrystallized several times and was then found to melt rather sharply at 91–93° C. This melting point is far too low for the nitrolbenzylamine base of pinene. Moreover, the nitrolbenzylamine base of limonene melts at 93° C., which fact would seem to indicate that in fraction 173–178° limonene is present. However, no tetrabromide could be prepared from this fraction.

SUMMARY AND CONCLUSION.

A rather preliminary chemical investigation of the volatile oil of Canada balsam has been made. The presence of pinene, previously reported by Fluekiger has been confirmed. That there is at least one other terpene present in this oil is indicated by the boiling points of certain fractions and by the benzylamine base of fraction 173–178°.

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84. An Unusual Oil from Monardo Punctata.*

BY MAX PHILLIPS.†

In connection with the experiments on the cultivation of *Monardo punctata* it became necessary to collect a larger amount of seeds. Hence, between October 18 and 20, 1917, forty-five pounds of matured flower tops were collected. The corollas had dropped long ago, so that only the calyces with the mature fruit remained on the expanded base of the former influorescence. Having been stored for about a month, the fruit heads were threshed, 3.5 lbs. (= 7.7 percent) of seed being obtained. However, there also resulted 40 lbs. (18,181 Gm.) of chaff which was not devoid of odor. Hence, this material was subjected to steam distillation. The original oil (152 Gm.) and the cohobated oil (12 Gm.) were mixed, affording a total of 164 Gm. or 0.9 percent. This is an unusually high yield of oil for Monarda material collected so late in the season.[1]

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* Read before Scientific Section, A. Ph. A., Chicago meeting, 1918.

† Fritzsche Bros. Fellow.

[1] From the work that has been done upon *Monarda punctata*, it seems that the largest yield of oil is obtained from young plants not yet in blossom. Last November 800 lbs. of dry plants were distilled at this station and a 0.77 percent yield of oil was obtained. (See also N. Wakeman, "The Monardas," p. 24 of Univ. of Wis., *Bull.* 448.)

This oil was exceedingly dark in color, possessed the relatively high density of 0.952 and assayed 82 percent of phenol.[2] It may be that if the material had been distilled immediately after the seeds had matured, in late summer or early fall, the density would have been found lower and the phenol content not so high. Hence, the experiment should be repeated earlier in the season. Although the amount of oil obtained was small, it nevertheless invited at least a preliminary investigation. For this purpose it was roughly resolved into its phenol and non-phenol components by shaking out the former with aqueous 5 percent sodium hydroxide solution and recovering the phenols from the phenylates by means of acid. Previous exposure to so low a temperature as —22° C. for two days had not caused anything crystalline to separate, even though the oil was diluted with an equal volume of heptane.

Phenols.—It has already been pointed out that the phenol content of the oil was 82 percent. With so large an amount of phenol the assay with 5 percent aqueous potassium hydroxide was likely to cause minor difficulties of technique. As a matter of fact, two days did not suffice to effect a separation of the two layers. However, this was readily brought about by the addition of 5 cc. of heptane.

In the separation of the phenol from the bulk of the oil, 200 Cc. of 5 percent sodium hydroxide solution were used at a time until all of the phenol had been removed. The bulked aqueous alkaline solutions were shaken repeatedly with ether in order to remove non-phenols dissolved in the phenylate solution. After recovery of most of the ether, the remaining solution, upon exposure to the cold, crystallized to an orange-colored mass. The bulk of this residue (40 Gm.) consisted of thymol, as was shown, upon purification with petroleum ether, by both crystalline form and melting point. The purified pigment, however, looked more like dihydroxy thymoquinone than thymoquinone. Hence, in place of obtaining non-phenol materials, as expected, both substances isolated proved to be phenolic in character.

The aqueous phenylate solution was then rendered acid with hydrochloric acid, a dark brown, viscid oil separating. This was rectified by steam distillation and then by direct distillation, the operation being interrupted when the temperature of 235° had been reached. During the process of distillation, crystals were observed to form in the condenser. Recrystallized from water, they melted at 135 to 136° and, after further purification by sublimation, at 140°. They also gave Lieberman's[3] quinhydrone reaction with thymoquinone, hence may safely be pronounced as hydrothymoquinone. This diatomic phenol was also isolated from the "tarry" residue remaining in the flask from which the phenols had been distilled.

The phenol oil that had distilled over below 235° did not crystallize within a week, hence was fractionated. Most of it came over between 225 and 235° and this fraction crystallized after an hour's standing. The bulk of the crystals consisted of thymol, but again brick-red crystals of what looked like dihydroxy thymo-

[2] The phenol content of the ordinary oil averages about 50 percent, though it runs as high as 60 percent. (See Wakeman's *Bull.* above given.) Hood even reports 72 percent, U. S. Dept. of Agr., *Bull.* 372.

[3] *Ber.*, 18, 3196.

quinone were observed. However, the amount was too small to make any tests of identity.

The aqueous distillate resulting from the steam distillation of the crude phenols was boiled with an excess of barium carbonate. The only observation worth recording was that the solution became wine colored, a color reaction produced by monohydroxythymoquinone under like circumstances.

It may be worth while to point out that of the 45 Gm. of crude thymol separated in crystalline state from the oil, 40 Gm. were obtained from the ether[4] with which the alkaline phenylate solution had been shaken, and only 5 Gm. from the oily phenols separated from the aqueous phenylate solution by acid. Hence, of the 134 Gm. of phenol indicated by assay, only 45 Gm. or 33.5 percent crystallized out and were characterized as thymol. No small amount of phenol separated as "tar."

Non-Phenols.—The small amount of non-phenol portion of the oil was likewise fractionated. Below 177° only 10 Cc. came over, and between 177° and 235° less than 20 Cc. From the residue in the flask some hydrothymoquinone was separated as described under "phenols" and identified as such.

Conclusions.—Although the amount of oil was too small to accomplish much, nevertheless this preliminary investigation has added at least one substance to the list of known constituents of *Monarda punctata, viz.*, hydrothymoquinone.[5] Reasoning by analogy with *Monarda fistulosa*[6] seemed to show conclusively that it must be present in the plant, but its isolation had heretofore escaped all efforts. Moreover, the presence of monohydroxythymoquinone is indicated by a color reaction and that of dihydroxythymoquinone but wants definite chemical identification. Hence, this minor diversion from a major problem seems fully justified, and if only for the reason that it will stimulate the efforts to secure a much larger amount of material next year and thus take another step in further establishing the interesting parallel in the biochemistry of *Monarda punctata* and *M. fistulosa*.

COMMERCIAL CULTURES OF BULGARIAN BACILLUS.*

BY EDGAR B. CARTER.

A short historical sketch opens the paper to show that Metchnikoff did not originate the theory of the harmfulness of the absorption of bacterial toxins from the intestines nor was he the first to suggest the use of the Bulgarian Bacillus in the treatment of these conditions. The bacteriological characteristics and the chemical

[4] The fact that thymol, dissolved in aqueous sodium hydroxide, can subsequently be shaken out with ether does not seem to have been reported in the literature before, although this phenomenon was observed by Jahns in connection with carvacrol. *Ber.*, 15, 817.

[5] It may be worth mentioning that hydrothymoquinone has been precipitated from ordinary, colorless, *Monarda punctata* oil by Dr. Edward Kremers by merely diluting the oil with the requisite amount of heptane; also that a number of previously unknown constituents have been isolated and identified by Dr. N. Wakeman. (See *Circulars of Wis. Pharm. Expt. Station.*) In both cases, however, the results had not been published at the time of this writing.

[6] I. W. Brandel, *Pharm. Rev.*, 19, 244.

* Read before Scientific Section, A. Ph. A., Chicago meeting, 1918.

changes produced in milk by the organism are taken up briefly, after which the three forms of commercial cultures are discussed. The advantages and limitations of each are shown. The paper closes with a description of the tests used to establish the values of the cultures with a simple test by which the pharmacist may satisfy himself as to their viability. A bibliography follows.

Philosophy is a very potent force in scientific work; it reasons far ahead of the known into the realm of the unknown, thereby furnishing not only an incentive for original work but assisting in the formulation of systematic schemes by which this work may be directed. In 1901, when Eli Metchnikoff, in a public lecture at Manchester, England, announced that his investigations had led him to the conclusion that the lifetime of mankind is limited largely by the absorption of toxins and the products of putrefaction from the bowels, he laid the foundation for all his subsequent work in which he attempted to discover the means of eliminating or at least decreasing this intestinal putrefaction, with a view to prolonging life for a number of years.

While we cannot feel that the work of Metchnikoff has to any extent solved the problem of the prolongation of life, he himself dying at the age of seventy-one, there can be no doubt but that his philosophy is sound and that possibly a younger scientist may take up the same work and ultimately achieve this great man's object.

There is probably no doubt but that a great many of the conditions appearing in man in which symptoms profoundly affect the nervous system, the circulation, and in a variety of ways the entire body, can be clinically traced to the intestines. As Metchnikoff pointed out and demonstrated, the absorption of these putrefaction products of proteins—the phenols, skatol and indols—produce degenerative changes in the arteries, kidneys, liver and digestive organs.

It is interesting to note that a few years later, the writer of the famous Craig Kennedy stories in the *Cosmopolitan* took for the plot of one of the crimes, in which the famous Craig brought the criminal to justice, the gradual but progressive poisoning of a rich husband by his young and beautiful wife, in which the dastardly deed was accomplished by secretly administering indol in the man's food and drink. It made an excellent and exciting story, although a very improbable one when we consider the strong and obnoxious fecal odor of indol, but no doubt it would have done the work if the man could have been forced to eat it.

Metchnikoff was not the first investigator to consider the harmfulness of the absorption of putrefaction products from the bowels nor was he the first to suggest a remedy. Since the trouble resulted from the bacterial decomposition of protein, it was quite natural that the early workers should attempt to combat the condition by adding acid-producing bacteria and carbohydrates to the diet on the basis of antibiosis or mutual antagonism which they had learned existed—cultures between many acid-producing bacteria and the saprophytic group. So in 1886 we find Escherich[1] and Brudzinske[2] proposing the use of *B. lactis aerogenes* and in 1887, Quincke[3] suggesting the use of the yeast *Oidium lactis*. It was not, however, until 1906 that Metchnikoff[4] suggested the use of the Bulgarian Bacillus which had previously been isolated and studied by Massol,[5] Cohendy[6] and Bertrand and Weisweiller.[7]

BACTERIOLOGY.

The *Bacillus Bulgaricus* (*B. Massol*) is a non-pathogenic, non-motile, non-sporulating, non-liquefying, Gram positive bacilius (involution forms are Gram negative) showing wide variations in lengths, from 2 to 50 microns and occurring singly or in short and long chains. It is both an aerobe and anaerobe, growing with difficulty on ordinary media, but easily cultivated in milk or in medias containing whey or malt. It grows best at 44° centigrade, fairly well at 30°, slightly at 25°, but not at all at 20°.

CHEMISTRY.

The *Bacillus Bulgaricus* belongs to the lactic acid-forming class of bacteria and in common with the *B. lactis aerogenes*, *streptococcus lacticus* and others, splits the hexoses of the monosaccharides into two molecules of lactic acid. In milk cultures the lactose is hydrolyzed and converted into galactose and glucose. The *Bacillus Bulgaricus* probably has nothing to do with the primary hydrolysis, for it does not form acid from lactose in the culture tube nor does it grow very well in media made with lactose. Not only is the bacillus resistant to high acid concentration but it is a vigorous acid producer, forming from 2 to 3 percent of acid in suitable media. While it is customary to speak of the acid resulting from the splitting of the sugars by the *Bacillus Bulgaricus* as lactic acid, Bertrand and Weisweiller[7] have shown that acetic and succinic acids are also produced in appreciable quantities. Recent work of Van Slyke and Baker[8] indicates that only a small part of lactic acid remains free in milk cultures. Immediately upon its formation, the lactic acid begins to combine with the basic phosphates and citrates of calcium, magnesium, sodium and potassium, forming monobasic or acid phosphate and citrate salts. When these reactions are complete, the acid combines with the calcium caseinate[9] forming calcium lactate and free casein. Hence the formation of the curd.

COMMERCIAL PREPARATIONS.

It is not within the scope of this paper to discuss the indications for the therapeutic use of Bulgarian Bacillus. We shall leave that to the clinicians. The preparation has been used for the treatment of practically every disease ranging from diabetes to fetid perspiration, but since all good things are carried to extremes by the enthusiast, we should not be surprised that some absurd claims should be made for Bulgarian Bacillus. It is sufficient to say that there is and will doubtless continue to be a very steady and increasing demand for preparations of Bulgarian Bacillus from the medical profession, who are surely separating the wheat from the chaff. It is for the pharmacist and pharmaceutical chemist to furnish them with dependable and potent products.

So far, the general use of Bulgarian Bacillus cultures has been limited to three forms—first, the liquid cultures; second, the tablets; and third, the suspension in a medium such as petrolatum—the problem being that of making accessible to the doctor massive doses of viable bacilli.

It is evident that the maximum doses of the bacilli can be obtained by the administration of the straight liquid culture in which the media is practically filled with bacterial bodies. Naturally such a culture, after incubation, must

be kept at a cool temperature—below 20° centigrade (68° F)—or the bacilli will continue to grow and soon exhaust themselves, so while liquid cultures require greater care, there can be no doubt but that they possess greater counts and if properly cared for should have a very rapid and very potent effect. The liquid cultures are prepared by growing the bacilli in sterile liquid medias, preferences being given to some variation of the Cohendy media. This consists of slightly alkaline whey to which has been added gelatine and cane-sugar. The growth is controlled by titrating the acidity and by actual bacteria count, and is stopped just short of an acidity which experience has taught us is detrimental to the life of the bacilli.

Before marketing it is tested bacteriologically to establish the identity of the culture and to assure the absence of contaminating microörganisms. The better laboratories also test each lot to determine its actual power to inhibit the growth of *bacillus coli*.

The tablets are prepared from milk or other liquid cultures, mixed to a mass with milk sugar, starch, or both, dried and formed into tablets. Although the bacilli are materially diluted by the powder necessary to form a tablet, their vitality is preserved over a much longer period of time and under more adverse temperatures. They are usually tested by dropping one tablet in a pint of sterile milk and incubating to obtain the souring of the milk with the characteristic curd in twenty-four hours.

Another method of preserving viable Bulgarian Bacilli is that of drying the culture at a low temperature and mixing them with an inert substance such as petrolatum. The petrolatum is generally colored red to minimize the effect of the light on the bacilli. This method, although in use for a number of years, was patented last March.[10] There can probably be no doubt but that this method is the most effective one known to-day for preserving the bacilli, but one cannot help but wonder if the protection afforded by coating the bacilli with mineral wax is not sufficient to prevent their later growth and multiplication in the intestines.

TESTS OF BULGARIAN PREPARATIONS.

Because of the fact that Bulgarian Bacillus can only be grown in a proper incubator and because of the fact that media used, which if contaminated will grow pathogenic bacteria abundantly, thereby making a dangerous instead of a beneficial culture, it would seem that the preparation of Bulgarian Bacillus cultures had best be left to the properly equipped biological laboratory. Bulgarian Cultured Milk, however, can be prepared very nicely in a drug store equipped with a fireless cooker, as the soft, smooth curd which results from the growth of Bulgarian Bacillus is very distinctive, as are the flavor and acidity. Bulgarian Cultured Milk can only be made of milk which has first been rendered sterile by boiling for a few minutes.

Even though he makes no attempt to grow the cultures, it is possible, however, for the pharmacist to make simple tests which will aid him in determining the value of the various cultures in which he is interested. The only absolute scientific tests of the cultures are the plating tests in which definite quantities are inoculated into suitable media, poured into petri dishes, and the number of typical colonies that develop, counted. Such a procedure can only be carried on by a trained bacteriologist.

Some men have attempted to judge the viability of these cultures by examinations for motility under the microscope, forgetful of the fact that the Bulgarian Bacillus is non-motile. Others have attempted to stain a smear of the culture and have also met with failure because there is not sufficient albuminous material in the media to properly fix the bacteria to the slide. If a few drops of the culture be mixed with a large drop of egg white or Mayer's Albumin Fixative and the two well mixed and smeared, if this smear be dried, fixed by heat, stained by Gram's method and examined under the high power of the microscope, a fairly good estimate may be made of the number of viable bacilli. All dead bacilli stain a Gram negative while those which are still viable are Gram positive. This interpretation will have to be modified in case the involution forms appear, as they generally stain as negative, even when living and capable of growth.

It is needless to say that the majority of the druggists to-day are making strong efforts to furnish their trade with potent biological products and are providing facilities for the storage of perishable articles at a reasonably low temperature; and it is the loyal coöperation of this class of pharmacists that makes possible the marketing of dependable cultures of Bulgarian Bacillus.

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ANALYSES OF MILK OF MAGNESIA.*

BY ROBERT WOOD TERRY.

Due to the wide variation of the declared content of magnesium hydroxide in the various standard brands of Milk of Magnesia, and the silence of other manufacturers as to the content, the writer became interested to know how many of these standard brands conformed to the U. S. P. IX or to the former standard, the N. F. III. It was with this object in view that these analyses were made.

Table A shows the percentage of Magnesium Hydroxide in the leading seven brands and five control samples—one prepared according to the U. S. P. IX, one according to the N. F. III, one according to Beringer's process[1] modified by

* Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., Chicago meeting, 1918.

[1] Geo. M. Beringer, Proc. N. J. Ph. A., 1913, pp. 46–48.

the writer, and two prepared from magnesium oxide. It will be noted that these seven standard brands vary from 5.22 percent to 9.79 percent $Mg(OH)_2 w/w$ or from 23.9 to 44.9 grains per fluidounce. The U. S. P. demands from 6.5 percent to 7.5 percent $Mg(OH)_2$ w/w or from 29.7 to 34.4 grains per fluidounce, while the former standard, the N. F. III, is 24 grains to the fluidounce or 5.23 percent w/w.

It is a deplorable fact that manufacturers will market a product that is as easily assayed as milk of magnesia with absolute disregard for official standard.

TABLE A.

No.	Source.	$Mg(OH)_2 w/w$.	Carbonates.	Foreign alkalinity.[1]	Sp. gr. C 25 C.[2]	Remarks.
1	Proprietary.....	5.71%	Ft. trace	6.4 mils N/10 V. S.	...	Not U. S. P. or N. F.[3]
2	Pharm. house.....	8.53%	Ft. trace	6.4 mils N/10 V. S.	...	Not U. S. P. or N. F.
3	Pharm. house.....	7.37%	Ft. trace	8.0 mils N/10 V. S.	...	U. S. P. except foreign alkalinity[4]
4	Pharm. house.....	8.42%	Ft. trace	11.2 mils N/10 V. S.	...	Not U. S. P. or N. F.[5]
5	Pharm. house.....	5.22%	Ft. trace	7.2 mils N/10 V. S.	...	Not U. S. P. Exactly N. F.[6]
6	Drug syndicate...	6.73%	Ft. trace	9.6 mils N/10 V. S.	...	U. S. P. except foreign alkalinity
7	Pharm. house.....	9.79%	Ft. trace	6.4 mils N/10 V. S.	...	Not U. S. P. or N. F.
8	N. F. III.....	3.22%	Ft. trace	3.2 mils N/10 V. S.[7]	1.010	Not N. F.[8]
9	U. S. P. IX.....	3.52%	Ft. trace	6.4 mils N/10 V. S.[9]	1.011	Not U. S. P.
10	Prep. MgO.....	6.24%	Present	6.4 mils N/10 V. S.	...	Not U. S. P. or N. F.
11	Comm. MgO.....	4.83%	Trace	4.8 mils N/10 V. S.	...	Not U. S. P. or N. F.
12	Mod. Beringer....	4.42%	None	7.3 mils N/10 V. S.	...	Slightly below N. F.

[1] Amount contained in 100 mils of magma.
[2] Approximate.
[3] Claimed 24 grains to fluidounce, found 26.2.
[4] Claimed 32 grains to fluidounce, found 33.8.
[5] Claimed 40 grains to fluidounce, found 38.6.
[6] Claimed 24 grains to fluidounce, found 23.96.
[7] N. F. contains excess of sulphate.
[8] Should be 24 grains, assayed 14.78.
[9] Washings corresponded to U. S. P. acid test.

There are only two of the seven that conform to the U. S. P. IX, and two that conform to the N. F. III. Although several of them declare a different standard on their labels, it should be in bold type and not in the reading matter. The writer does not approve of the U. S. P. IX standard for the preparation, yet the manufacturers should consider the standard for the sake of uniformity and justice to the public, if for nothing else. Milk of magnesia is widely used to delay the coagulaton of cows' milk in the infant's stomach and a slight variation of alkalinity here will retard or accelerate the coagulation far more than is proportional to the concentration of the alkali. So it will be seen that this variation is really of more importance than is at first apparent.

In assaying milk of magnesia, phenolphthalein is the proper indicator, rather than methyl-orange as is directed by the U. S. P. IX. If the methyl-orange is added to the magma before acidification, the methyl-orange acts like certain organic coloring materials in the presence of certain metallic hydroxides and forms a magnesium lake. This substance has no property of an indicator and upon acidification the indicator property is not restored. If the methyl-orange is added after acidification of the magma, the influx of the alkaline volumetric solution causes momentarily a precipitate of magnesium hydroxide which partially destroys the methyl-orange, and under these conditions, the end point is anything but definite.

None of the samples contained excessive carbonates as shown by the U. S. P. IX test except No. 10, which was made from a magnesium oxide which is marketed especially for preparing milk of magnesia.

In testing for foreign alkalinity, the writer did not use the official process, namely—that of evaporation of the supernatant liquid from a dilute magma to constant weight and titration of the residue. The writer's method is to mix 25 mils of magma with 175 mils of distilled water and titrate the supernatant liquid, using phenolphthalein as indicator. This is quite a saving of time and at no expense of accuracy. The figures for foreign alkalinity in Table A are the number of mils of $\frac{N}{10}$ acid required to neutralize the foreign alkalinity of 100 mils of the magma. The U. S. P. limits this to 4 mils, whereas the above preparations in every case except one contained more than this (even up as high as 11.2 mils). Sample No. 9 was prepared strictly according to the U. S. P. IX and the washings corresponded to the dilute sulphuric acid drop test, yet the product exhibits a foreign alkalinity of 6.4 mils per 100 mils of magma.

In the U. S. P. IX process, the magnesium hydroxide is produced by the interaction of sodium hydroxide and magnesium carbonate, sodium carbonate being the only by-product of the reaction, it is far easier to titrate sodium carbonate than to evaporate the liquid to constant weight and then titrate. It requires only a few seconds to ignite a part of the magma in a porcelain crucible to determine if any starch, sugar, gum or mucilaginous substances are present. Their presence would be indicated by carbonization. I presume this is the object of evaporating to constant weight in the official foreign alkalinity test.

The specific gravity of this U. S. P. IX magma is 1.011 and the N. F. III magma is 1.010 at 25° C.

It is agreeable to note that two of the marketed samples claimed 24 grains to the fluidounce and these assayed 26.2 and 23.96 grains, respectively; one claimed 32 grains and assayed 33.8 grains; one claimed 40 grains and assayed 38.6 grains; one claimed 46 grains and assayed 44.9 grains. It is significant to note that samples prepared according to the U. S. P. IX and the N. F. III fell way below the desired strength. The U. S. P. IX sample contained only 3.52 percent $Mg(OH)_2$ while it should be between 6.5 percent and 7.5 percent. The N. F. III sample contained only 3.22 percent while it should be 5.23 percent. Sample No. 10, that prepared by a special magnesium oxide for this purpose, assayed 6.24 percent, while it should be about 8.5 percent, that is, according to the manufacturer's statement. Sample No. 11, prepared from a commercial magnesium oxide, assayed 4.83 instead of being 7 percent as desired. Sample No. 12, that prepared by Beringer's process but washed by the writer's procedure, assayed 4.42 percent instead of being 5.23 percent as desired. Charles H. LaWall gives results of assays of milk of magnesia with practically identical results. The variation in the content of magnesium hydroxide was over 300 percent.[2]

In the preparation of sample No. 12, the magma is precipitated by pouring the hot magnesium sulphate solution into the hot sodium hydroxide solution, maintaining a degree of alkalinity throughout the precipitation that ensures complete precipitation of the magnesium, which does not occur in the N. F. III

[2] Chas. H. La Wall, JOURNAL A. PH. A., 1914, pp. 1002–1003.

process where the procedure is reverse, in the cold.[3] Beringer's process contains an excess of about 10 percent alkali, which is proper. The writer modified Beringer's process only in washing the magma, endeavoring to formulate an extemporaneous process. As the precipitation is conducted at boiling temperature, the magma filters rapidly, so that as soon as precipitation is complete, the whole may be poured at once on a filter paper and allowed to drain; the magma is then transferred back to the vessel and distilled water added equal to double the volume of desired magma; the mixture is then boiled and refiltered, this being repeated again twice; then the washings will conform to the U. S. P. IX dilute sulphuric acid drop test. It is true that considerable magnesium hydroxide is lost due to the several transferrings necessary, but what was desired here, was to see how rapidly a milk of magnesia could be prepared, which was accomplished in three hours. Washing in this manner, although probably not feasible on a large scale, would be of considerable advantage to the pharmacist because of the rapidity of production and the use of a minimum amount of distilled water, which is one of the reasons that few retailers make their own milk of magnesia. It is quite possible that milk of magnesia could be washed by dialysis on a commercial scale, and if so, it would have several advantages over the decantation method.

The quantitative relations of the sodium hydroxide and magnesium sulphate in the N. F. III formula are in error, as it requires 81.5 grammes of absolute sodium hydroxide to precipitate 250.0 grammes of magnesium sulphate. The N. F. process calls for only 81.0 grammes of U. S. P. sodium hydroxide, which is only 90 percent absolute sodium hydroxide, so that there is a deficiency of alkalinity amounting to a little over 10 percent making it impossible to prepare a magma from the N. F. formula containing over 4.7 percent $Mg(OH)_2$. There is always considerable magma lost mechanically in siphoning off the supernatant liquid and in transferring the magma from the strainer. But, peculiarly, if all the 250.0 grammes of magnesium sulphate were precipitated, it would produce theoretically a magma containing 5.9 percent magnesium hydroxide less than mechanically lost.

The preparation of milk of magnesia by hydrating the oxide has proven a failure in the hands of the writer and also several manufacturing pharmacists. It is almost impossible by this method to secure complete hydration, some of the oxide remaining unhydrated and suspended throughout the mixture. A macroscopic examination of the mixture will show its semi-granular nature. Milk of magnesia prepared by this process seems to cake on standing.

In the U. S. P. IX process, there is an alkaline carbonate medium for the precipitation, yet the magma seems to be composed of both oxide and hydroxide which does not give the proper viscosity to the product and, furthermore, it requires eight to ten washings to remove the alkalinity. If the hydration of the magnesium carbonate is intended to be performed by the sodium hydroxide only, and not by absorption of water in the reaction, which is probably the case, then the U. S. P. formula would require for the 125.0 grammes of magnesium carbonate, based on the following reaction, 82.37 grammes of absolute sodium hydroxide to ensure complete hydration of the carbonate:

[3] Sam. T. Hensel, JOURNAL A. PH. A., 1914, pp. 1118–1120.

$$(MgCO_3)_4.Mg(OH)_2.5H_2O + 8NaOH = 5Mg(OH)_2 + 4Na_2CO_3 + 5H_2O$$

485.70 — 320.08 — 291.70 — 624.00 — 90.08

805.78 — 805.78

TABLE B.

No.	Sulphates.	Chlorides.	Heavy metals.[1]	Arsenic trioxide.[2]	Talcum.	Ignition.	Hot and cold permanganate. Acid.	Hot and cold permanganate. Alkaline.
1	Small amount...	None	Minute trace	Faint trace	None	No carbonization	No reaction	No reaction
2	None.....	None	Present	Faint trace	None	No carbonization	No reaction	No reaction
3	Trace.....	None	Minute trace	Faint trace	None	No carbonization	No reaction	No reaction
4	Trace.....	None	Present	Faint trace	Present	No carbonization	No reaction	No reaction
5	Faint trace.....	None	Present	None	None	No carbonization	No reaction	No reaction
6	None.....	None	Trace	None	None	No carbonization	No reaction	No reaction
7	None.....	None	Minute trace	Faint trace	None	No carbonization	No reaction	No reaction
8	Present[3].....	None	None	None	None	No carbonization	No reaction	No reaction
9	None.....	None	Minute trace	None	None	No carbonization	No reaction	No reaction
10	None.....	None	Minute trace	Faint trace	None	No carbonization	No reaction	No reaction
11	None.....	None	Minute trace	Faint trace	None	No carbonization	No reaction	No reaction
12	Present[4].....	None	Trace	None	None	No carbonization	No reaction	No reaction

[1] U. S. P. IX test.
[2] U. S. P. IX test.
[3] $BaCl_2$ test; precipitates slightly.
[4] Does not precipitate. $BaSO_4$ remains suspended.

The U. S. P. formula calls for 80 grammes of U. S. P. sodium hydroxide, the equivalent of 72 grammes of absolute sodium hydroxide, a deficiency of 10.37 grammes of absolute sodium hydroxide. The U. S. P. IX formula should have at least 91.52 grammes of U. S. P. sodium hydroxide, the equivalent of 82.37 grammes of absolute sodium hydroxide, to ensure complete hydration, and to have an excess of sodium hydroxide in the formula 100.0 grammes is about the proper amount to use. Then the formula will theoretically produce a magma containing 7.507 percent of magnesium hydroxide. "The official formula, known as McNeary's formula, has proven somewhat unsatisfactory in our hands, etc."[4]

The writer believes the production of milk of magnesia by the interaction of magnesium sulphate and sodium hydroxide is far superior to the U. S. P. IX process. The degree of gelatinization of the hydroxide may be controlled by the dilution of the solutions that are to be mixed and the temperature of the mixing. The magnesium hydroxide should be as gelatinous as possible and still maintain fluidity; in this condition we have pharmaceutical elegance combined with maximum therapeutic activity. Due to the minute state of subdivision of the magma, it exhibits maximum activity and does not separate so readily on standing.

Table B gives results of tests for sulphates, chlorides, heavy metals, arsenic, talcum, and the application of ignition and acid and alkaline permanganate tests. The samples were tested for sulphates to determine which were prepared by the sulphate method and to determine the extent to which the magmas were washed. The samples were tested for chlorides to determine if distilled water was used in washing the magma. Three of the magmas marketed by pharmaceutical houses contained more heavy metals than allowable by the U. S. P. IX tests. None of the preparations contained as much as the allowable limit of arsenic, 1–100,000, based on 1–100,000 of the magnesium hydroxide content of the magmas. Talcum was present in one marketed product and how it could be present, and why, is

[4] Nat. Stand. Disp., 1916, p. 983.

not understandable. None of the products were carbonized on ignition, thus probably showing the absence of sugar, starch, gum, etc. None of the preparations reacted with acid or alkaline permanganate, thus showing the absence of glycerin, sugar, etc. Sample No. 1 gave no ether soluble extractive matter, thus showing the absence of flavoring oils.

Table C shows results of a microscopic examination of the magmas which readily shows the difference of the physical state of the magnesium hydroxide produced by the different processes. Several of the samples contained small acicular crystals resembling sodium sulphate but what the crystals were was not determined.

TABLE C.

MICROSCOPIC EXAMINATION OF MILK OF MAGNESIA.

No.	Result.
1	Particles in minute state. No crystals.
2	Magma fairly finely divided. No crystals.
3	Magma finely divided, same as No. 1, occasional acicular crystals.
4	Resembles gelatinized starch. Acicular crystals present.
5	Exceedingly fine magma. No crystals.
6	Magma very fine, occasional small crystals.
7	Resembles small gelatinized starch grains. No crystals.
8	Particles in minute state. No crystals.
9	Resembles gelatinized starch grains. No crystals.
10	Resembles gelatinized, large, starch grains. No crystals.
11	No examination made.
12	No examination made.

From the above data, information is gleaned that may be useful to the Revision Committee of the U. S. P. X, as follows:

1. That milk of magnesia be prepared by interaction of magnesium sulphate and sodium hydroxide and that the sodium hydroxide be in excess of the theoretical amount to at least 10 percent.

2. That tests be conducted to determine the feasibility of washing the magma by the hot process as above suggested, or by dialysis.

3. That the purity rubric read, magnesia magma yields not less than 5.0 percent nor more than 5.5 percent of $Mg(OH)_2$ (58.34).

4. That the limit of permissible foreign alkalinity be raised to the equivalent of 8.0 mils of $\frac{N}{10}$ V. S. to 100 mils of magma.

5. That the foreign alkalinity be determined by titration of the supernatant liquid from a diluted magma rather than by evaporation.

6. That a portion of the magma be ignited in a porcelain crucible to determine the presence or absence of carbonizable organic matter.

7. That a test be included to limit the presence of heavy metals.

8. That a test be included to limit the presence of arsenic.

9. That the process be made so as to form a magma containing as high as 6 percent $Mg(OH)_2$ if possible and that it be then assayed and diluted to meet the purity rubric.[5]

10. That the assay process be identical with that of the U. S. P. IX except phenolphthalein replace methyl-orange as the indicator.

COLUMBUS, OHIO,
AUGUST 10, 1918.

[5] This procedure will cause the magma to separate, but inasmuch as it appears impossible with our present processes to produce a magma of the desired strength that will not separate, it seems to the writer that the logical and proper thing is to sacrifice pharmaceutical elegance for uniformity.

HISTORY OF THE ARSENICAL SOLUTIONS.*

ABSTRACT.

BY H. A. LANGENHAN.

The use of arsenic in medicine begins at an early period, although it was restricted to external applications only. At the end of the eighteenth and beginning of the nineteenth century its use for internal administration came into effect. Hence in 1771 we find that a Thomas Wilson placed on the market in London a secret preparation commonly known as *Tasteless Ague and Fever Drops* which, according to the specifications of his patent, contained arsenic trioxide. It was this preparation which Hughes, the apothecary at the infirmary of Stafford, analyzed and attempted to duplicate, at the request of Dr. Fowler, also of the infirmary. In 1786 Dr. Fowler published a detailed report of the effects and results obtained from the use of his solution of arsenic, to which he applied the title *Liquor Mineralis*. This solution found its way into the London Pharmacopoeia of 1809 and into the U. S. P. of 1820. From these it rapidly found its way into most of the pharmacopoeias and at the present time can be found in over twenty of the standards of various countries.

As a natural sequence, other preparations of arsenic soon came into medical use. Dr. Withering, a co-worker of Dr. Fowler's, used a solution of arsenic trioxide in water. This he found was prone to decomposition and adopted the use of Fowler's alkaline solution. A short time after the introduction of Fowler's solution, Dr. De Valangin, a Swiss physician practicing in London, introduced a solution under the name of *Solution of Solvent Mineral*. This consisted of arsenic trioxide, obtained in a round-about way, dissolved in water containing some hydrochloric acid. This solution first appeared in the London Pharmacopoeia of 1851 and in the U. S. P. of 1870. In the latter, it was known as solution of arsenious acid.

Because of the use of arsenic, iodine and mercury in the treatment of "psoriasis, lepra and lupus," Dr. Donovan, of Dublin, prepared a solution containing these three elements in combination. This solution appeared in the Dublin Pharmacopoeia of 1851, as originally prepared by Donovan, and in the U. S. P. of 1850. In the latter text the modified formula suggested by Soubeiran was adopted (*J. Chim. Pharm.*, 27, 774 1841). Although some American treatises give Procter the credit for the suggestion of the modified formula which the latter published in 1847, (*Am. J. Pharm.*, 19, 93) the two are identical in substance, although Procter makes no mention of Soubeiran's report.

At the present time Donovan's Solution, is found in the United States Pharmacopoeia and the British Pharmacopoeia. Other pharmcopoeias apparently have not adopted it.

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* Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., Chicago meeting, 1918.

A PROPER COLLEGE OF PHARMACY COURSE THAT IS OF INTEREST TO THE COMMERCIAL DRUGGIST.*

BY EDWARD SPEASE.

It is perhaps presumptuous for me to assume that I can offer a course in Pharmacy that is completely formed and well balanced enough to deserve the term "proper" as outlined in the subject given to me, and it might be better to rewrite the subject thus—Some Ideas on Pharmaceutical Education that may be of Interest to the Commercial Druggist.

The above subject would further imply that besides the Commercial Druggist, there is some other kind. I shall not attempt to differentiate between the two.

While it is true that many noble men and women have given up their entire lives for the sake of ideals, I do feel that in the case of the retail drug merchant he should be so equipped that he can succeed financially. I do not believe that he is called upon to conduct his business at a loss, and the public receives better service if he be contented with his choice of life work.

In no other profession or business is the temptation greater to be dishonest, due to the lack of knowledge of drugs by the laity and, from early times, through more or less of superstition thrown about drugs and cures by charlatans, all business. To-day needs a knowledge of methods, and training is just as essential for the small merchant as for the large one.

Upon the editorial page of the July 1918 issue of the *Bulletin of Pharmacy* appears an editorial under the caption "The Survival of the Fittest." There are some very excellent thoughts inscribed, as well as a few that I can scarcely subscribe to. The worthy editor has limited his article to the "training of young men for the actual conducting of drug stores." I shall view my subject from that angle.

The major portion of the editorial is a plea for the teaching of biological pharmacy, and, that less time be devoted to the manufacture of galenicals and the microscopic study of crude drugs. In regard to the study of biological pharmacy, I believe, the writer's point is well taken. In my own school we are not giving this subject enough attention, and this is probably true of some other schools.

The problems that confront educators on this particular subject are largely due to their appreciation that a thorough training in both elementary bacteriology and chemistry should precede biologic pharmacy. This is impossible in the short time now allotted to pharmacy courses. It is true that a student, thoroughly grounded in salesmanship, can handle and sell biologics to the full satisfaction of the manufacturer if he reads their literature and handles them solely as merchandise. But here, I wonder if the true merchant should not know something of the quality of his merchandise? This same thought holds true for everything the druggist sells.

Should not the pharmacy student be trained in the method of manufacturing galenicals so that he can intelligently judge of those he buys, whether he should buy or make them and perhaps become a judge of the house from whom he buys?

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* Read before the Section on Practical Pharmacy and Dispensing, A. Ph. A., Chicago meeting, 1918.

A slight touch of microscopy might not be amiss in order that he may know how the manufacturer should judge his crude drugs, if for no other reason. I believe in the technical or scientific studies for the pharmacy student, if for no other reason than that he may talk intelligently to the physicians and customers. Is not the training he now receives intended solely that he may properly carry out the basic principles of salesmanship?

I also think that without commercial pharmacy the student is utterly unfit to be loosed upon the public. Let us teach him salesmanship, advertising, system, business methods, and the like, but let us not do so at the expense of his knowledge of the scientific side. Why can we not teach both? The professor who said that it is "universally conceded that there is none too much time" now for the teaching of pharmacy, stated a truth. Did it ever occur to you that there is a far greater number of things for the retail drug merchant to learn than for any other merchant?

The "chain" store hires its specialist for each line, or at least for similar lines, and especially for those lines that require specific knowledge for both buyer and salesman. Do you like to buy shoes of a merchant who does not know leather, or who is ignorant of the quality he carries? You may answer he carries standard brands, and the druggist should do the same. I ask, is the laity informed on standard pharmaceutical merchandise, and who should be the judge?

The physician to-day—or perhaps it would be more fair to say the physician teaching in the medical schools—says it is a mistake to teach the pharmacy student a knowledge of the therapeutic action of drugs, because he will counter-prescribe. Have any of you ever observed it to be the rule that mankind errs in ethics and honesty because of too much knowledge?

Every pharmacist knows that it is impossible to properly buy, preserve and compound drugs without some knowledge of their general therapeutic effect. The true fault with pharmacy to-day is lack of education. Our schools have sometimes made the graduate feel that he is completely educated, when he has only touched the "high spots." Our schools and our profession have not kept pace with the times.

Pharmacy is a broad subject, and we must view it so. Too many of us have single-track minds. Have our schools, our professors, our jobbers, our manufacturers, and, yes, our physicians, constantly recognized the fact that they best serve the public, and consequently themselves, by looking after the retail drug merchant? In my opinion they have not all done so. I do not want to be understood as antagonistic to the drug manufacturer, but I am trying to look at this subject from the broader viewpoint—that of the public.

Is the public best served by the manufacturer selling directly to the physician? I say no. The physician forgets his therapeutics, if he ever was taught any, and "dishes" out the genteel proprietary sold him by the manufacturer. The manufacturer also stocks up the druggist with them. These two stocks are duplicated, and the public suffers from old merchandise, from fitting the drug to the case, from a lack of intelligent prescribing; and the druggist suffers from loss of business, and the dead stock which remains on his hands.

The same condition may prevail in biologics; does it? Would it not be better to have the retail drug store as the depot for medical supplies, both drugs and biologics, and thus have one stock to furnish a number of physicians rather than

to have a stock in each physician's office? Would the public not have better service and fresher supplies according to this plan? As it is now, the manufacturer's salesman in a locality is the depot for the physicians' supplies.

This seems to me a mistaken policy for the manufacturer to pursue. Will it not eventually kill the business of the pharmacist, thus materially injuring the business of the manufacturer? Will the physician ever be trained so he can compound his own drugs, or should he rely entirely on those compounded by manufacturers? As stated before, this form of compounding will never be for each individual patient. Right here is where the public is not best served. In my opinion it is a short-sighted policy on the part of the manufacturer, as his desire to sell much merchandise to-day may kill his market for to-morrow.

The public will some day demand an accounting. Will the retail drug merchant go, and will his drug line revert to the doctor and his sundries and specialties to the department store? I rather doubt this sort of adjustment. The public is accustomed to go to the druggists for merchandise and drugs of quality. They prefer to buy remedies for minor ills directly from the druggists. Our schools must come to the front and save the retailer. How? By more education to help him cope with business conditions, and, the knowledge we can give him will help him to triumph over his difficulties.

To do this, we must elevate our standards. We must bring high-school graduates into pharmacy; we must kill schools maintained for financial profit and equipped merely to advise the sale of manufacturers' specialties. We must lengthen our courses. Two years is sufficient time for the scientific subject for the retail merchant. Two years more should be spent in salesmanship, advertising, accounting, investments, business law, insurance, business organization, and courses in economics, English, and even psychology. Why not courses that show the selling points of a toothbrush, of what it is made? The same of hand brushes, cigars, rubber goods, and the numerous other sundries. Let these last be the "high spot" courses; not the scientific ones. Let us teach honest merchandising, and not just the best way to "put over" on the customer a package of anything that persistent advertising has put on the shelf.

In this connection I should like to call to your attention the courses outlined in the catalogue of the School of Pharmacy of the University of Washington. I cannot agree that the colleges are "stubborn," but must insist that too much stress has been given by the propagandist that the school of pharmacy is passé. The school should also prepare students for analytical pharmacy, manufacturing, entrance into medicine, and for lives of scientific work; but with these things this paper is not concerned.

I urge that druggists now in the retail business should make it their concern to see that the pharmacy schools make better clerks and better future pharmacists. This can only be accomplished by a broader educational training, a longer period of preparation, and by combining the schools with the universities where the services of the proper teachers may be obtained.

I firmly believe in commercial pharmacy and likewise feel that education as well as training is essential to good merchandising.

CLEVELAND SCHOOL OF PHARMACY,
WESTERN RESERVE UNIVERSITY.

THE PRACTICAL PHARMACIST FROM A MANUFACTURER'S VIEWPOINT.*

BY ROBERT C. WHITE.

Practical Pharmacy and Dispensing suggests chiefly practical pharmacy, as it would seem that practical pharmacy should include dispensing.

Having been away from all dispensing proper for fifteen years, the ordinary process of elimination leaves in the title the two words "practical pharmacy." The personal element involved in practical pharmacy, of course, brings us to the man himself, thus making our subject "The Practical Pharmacist." There may be many definitions for the word practical, but at the present time the writer prefers the definition as applied to a machine. If you asked any one engaged in manufacturing what a practical machine was, the reply would be, ninety-nine times out of one hundred, "one that worked," and yet a modification must be applied to this in that it must be one that works dependably, or in other words one that works all the time effectively. Many manufacturers load a machine down with many parts of nickel and brass, with unnecessary cams and gears, which all tends to make a bewildering array of trimmings. This, unquestionably, may momentarily attract the attention of the ignorant, and even admiration, but machines so constructed will not work day in and day out without trouble. But what a joy to a manufacturer is a machine that day in and day out never fails. How soon the rhythm grows into the makeup of the operator. How month after month its steadfast performance endears it to the owner, simple, unobtrusive, but efficient; daily performing all expected of it, and all summed up in the word dependable. Now of the pharmacist. What is a practical pharmacist? We all know what comprises the pharmacist, but what of the practical pharmacist? Like the fancy machine, we have all seen the fancy pharmacist. The silk-shirted man, with the goatee, the black-rimmed glasses secured with broad black ribbon, whose chief ambition in life is to have his neighbors call him "Doc," but whose ointment is gritty, whose shelves are dusty, whose dispensing sink is full of dirty utensils and roaches, whose cellar is a fire menace to the neighborhood, and who buys his lime water from the jobber. This man makes many motions, uses much energy, appears very wise, but bewails the fact that the doctor sends his patients to other druggists who appear mere plodders, finally gives up, claims the retail business has gone to the canines, and calls on the manufacturer for some kind of a position many of which he understands are obtainable, with short hours, large pay, and no work.

This explains just why the manufacturers find a good retail druggist looking for a position a rarity.

As a rule a practical man makes good anywhere, for practical after all spells success. Successful men in any calling are ordinary men whose development has not been arrested by cigarettes, hops, the cabaret, short skirts and idleness, and who realize that to be something they must do something.

This brings us to a more important part of this subject. Why do manufacturers receive applications chiefly from retail failures, or from men hunting for something easy? Do the greater number of the practical pharmacists, as

* Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., Chicago meeting, 1918.

graduated from our colleges, go into the retail business and, proving successful, remain there? And do only the shirkers and indifferent students seek positions with the manufacturers, on the basis that the manufacturing business provides short hours, easy work, and large pay? This is a matter which demands our attention whether we be engaged in the retail drug business, the manufacturing business, or in the teaching of pharmacy in colleges. In fifteen years' of experience in the manufacturing business the writer has been surprised to find how prevalent is the idea that the manufacturing business is full of ease and simplicity, and that the retail business is full of exhausting work and responsibility. This is an idea which must sooner or later be corrected in the colleges where men are trained, and later in the retail or manufacturing business where men become practical. In years gone by the retail druggist was accustomed to look askance at the manufacturer, because his place of business became large, and he created the impression of wealth. There was the age when the retailer preferred to make all the products which he was capable of compounding, and purchased only such products of the manufacturer as the manufacturer's advertising campaigns forced him to handle. The breach between these two great factors in practical pharmacy, it would seem, is now entirely healed, and it is apparent that these two great bodies of business men must view the question of help from the common standpoint of need. How often has the retail druggist disparagingly stated that a large number of bright young druggists are being absorbed by the manufacturing business, yet how often has the manufacturer bewailed the fact that so many bright college graduates possess the ambition to enter the retail drug business in order that they may be in business for themselves. So long as the retail druggist is largely dependent upon the manufacturer for a very large proportion of his merchandise, and so long as the manufacturer must needs be dependent upon the retail druggist for the disposing of his wares, it would appear that their interest, so far as labor is concerned, could be none other than mutual.

A man to be successful in either branch of the business must be practical. Too many of us let ourselves grow with the idea that the colleges should turn out finished and perfected men. This is not the case. The colleges, at best, can only turn out men sufficiently versed in the art of pharmacy to become practical. In conversation with manufacturers, college professors, and successful retailers the impression comes to the writer that there are two different phases to consider.

The student after graduating from college, and passing his State Board Examinations, may engage in business immediately, or more often may serve a certain length of time with a retail druggist in order to become practical in the retail business, to learn the buying, the art of handling customers, the keeping of accounts, etc., but, even so, he may in a very short while, if he has the ambition leading in that direction, become the independent possessor of a business of his own. This may involve tedious work, it may include long hours, and by some it is stated that very large fortunes are not often made in the retail business, consequently a man must, according to the dictates of his ambition, figure on the value of his independence as found in his own business. The manufacturing field, on the other hand, is by no means a rosy path to success. A man leaving college, and obtaining employment in a large manufacturing plant, finds a bewildering array of machinery, numerous people, and intricate methods through which to climb to success. He must shoulder many heavy responsibilities. The difference that exists between these

two fields is no more clearly exemplified than by the fact that very rarely does a successful retailer make a good manufacturer, and more rarely does a manufacturer ever become a successful retailer, allowing that the training in college has been the same. This brings us to the place where we must realize that the practical training of these two classes after college differs radically. To the manufacturer it would appear, at this stage, that the young pharmacist in college has been given a training which leans more to the retail business than to manufacturing, and rightly so, for fully eighty percent of the men graduating from college engage in the retail business. Thus the manufacturer is justified in his claim that he must begin where the college left off, and train the young pharmacist for the manufacturing game. Does this not then suggest to our colleges the need of some modification, whereby additional training could better fit men for manufacturing? When a college graduate enters a retail drug store, he is, or should be, of considerable use to the proprietor from the moment of his employment. This is not the case in the manufacturing business. The college graduate is lacking in many of the practical phases concerning the compounding of drugs on a large scale. Very brief mention is made in our text-books and colleges of the various large appliances and mechanical processes which are necessary for the turning out of goods in a large way. Therefore, for the sake of our young men, who must needs engage in the manufacturing work wherein only a few in a great number may go far in reputation and skill, would it not be wise to make a plea that our colleges of pharmacy give more time to subjects dealing with manufacturing, and thus develop what might be called "the practical all round pharmacist?" The day is not far distant and in fact is beginning to dawn, when all the reputable manufacturers of the country will not only be willing, but glad to reveal, to any one sincerely interested, their methods, and, in the majority of cases, even glad, to reveal the workings of their usually self-invented processes and machinery. There are a number of manufacturers of pharmaceutical machinery who would undoubtedly be glad to place in our colleges of pharmacy more or less permanent exhibits of their machinery, at least those of smaller dimensions, whose catalogues illustrate clearly the uses to which these machines might be put. Would this not prove also a very helpful factor to the retailer who shows his interest in manufacturing things, by giving up yearly a large amount of his already overtaxed time to listen to statements by salesmen and detail men of the various processes used by their respective houses in making goods in a large way?

The question of help for the retailer or the manufacturer is not therefore the vital question. The question is how our colleges can help develop the practical retail pharmacist and the practical manufacturing pharmacist to the end that they may go far in their calling, for it is only from the colleges of pharmacy that the manufacturer and retailer may draw. How many misfits are there in the retail drug business who would have proven great manufacturers if their inherent love of mechanics had not been dwarfed; how many unsuccessful men in the manufacturing drug business would have developed into great merchants had their lot been cast behind the counter where their talent for handling prospective customers could have been developed? How much more successful might be the colleges, and, how many years of a young's man's life spent in apprentice work in the manufacturing business might be saved if our colleges attempted to give more attention to the methods used in this large field of practical pharmacy.

But what of the practical man himself? The man himself must possess health, the body demands air, fuel and water in proper proportions; the ideal combination leads to physical health. The practical pharmacist must maintain his health. How many men treat a piece of mechanism with the utmost care and yet are regardless of self. How often we see druggists who give more attention to their balances and microscopes than they do to their own bodies, the most wonderful of all instruments. So much for the body. Next the mind of the practical man must possess inspiration, truth and purpose, yet these must be balanced. Too much inspiration without truth and purpose means lack of common sense. Too much truth and insufficient inspiration and purpose produce the theorist. And purpose without truth produces only the dreamer, and the practical pharmaceutical field is no place for the dreamer.

So the pharmacist after leaving college must develop his practical ability, and ability is practical when it comprehends the relative value of things and accomplishes that which is really worth while.

How much time and effort is wasted by many pharmacists—they weigh so accurately everything used in their business, but rush into plans and schemes involving capital and energy without attempting to place the cost on one side and the result on the other side of their mental balance. Before committing himself to any course of action the practical pharmacist should first reason—is it worth while?

This leads us next to experience, that most costly but most thorough of teachers—the more experienced a pharmacist becomes the better practical pharmacist he should be, and his association with other pharmacists should to a considerable extent give to him the benefits of their experience—hence the value of our many pharmaceutical associations.

And now in conclusion, the practical pharmacist must be a man of good pharmaceutical training, having physical health, in order that he may radiate good health and cheerfulness. His mind must be possessed of inspiration, truth and purpose—creating in him a belief in his business, a belief in himself, and a belief in his fellow men. He must have sufficient experience gained by himself, augmented by the experiences recorded in his association with others to the end that he understands the relative value of things, and accomplishes that which is really worth while. With fifty thousand such men in the United States pharmacy would not have to ask the recognition now sought in the Army, and the never-ending articles on the "Relationship of the Doctor and Druggist" would disappear from the columns of our pharmacy journals forever.

DISCUSSION.

JOHN A. HANDY: I would like to say a word of appreciation of this paper. For nine years I was instructor in one of the colleges of pharmacy. I had no business experience except what would naturally be obtained by working in a drug store, and was suddenly transferred to a large factory where I had to take over the duties of handling large numbers of men and women and boys and girls. Instead of making preparations in a small way we manufactured in large quantities. I can appreciate every word that the author has said regarding the opportunities for good live, healthy, well-balanced students of pharmacy in the practical pharmacy fields. I am looking now for such a balanced man to come into our factory and work. Some want to come in because of the shorter hours and larger pay but most of them have been failures in the retail business. This paper is an inspiration.

A UTILIZATION WHICH CONSERVES.*

BY J. C. PEACOCK.

The explanation of this paradoxical title is the utilization of stock on hand in order to conserve capital.

The specific application of the plan is to those drugs which come under the Harrison Act, especially the tablet, pill and such other forms as are possible of use under certain circumstances.

The quantity of these drugs, which is dispensed by the average pharmacist is not large, at most. But they represent invested money which, being idle, is consuming the profit that some other item yields. It is very probable that most pharmacists, who anticipated the wants on physicians' prescriptions before the days of this law, found, when they made their first inventory under it, an accummulation of various tablets, pills, elixirs, syrups, etc., of many strengths, and, perhaps, of several makes.

It is also quite as probable that, with each succeeding inventory, they have been impressed with the extent to which this stock has remained on hand.

And, surely, after one or two such presentations of this fact, the pharmacist must realize that this portion of his capital is seriously inactive.

The tablet forms of cocaine, morphine, codeine and heroine, as alkaloids and salts, are perhaps the greater portion of such stock. There are tablet triturates and hypodermic tablets of all, and in addition to these, pills, elixirs, syrups and some other forms of the three opiates.

The pharmacist who would like to get rid of these can do so by constant attention to the calls for such drugs on prescriptions, for there are many opportunities wherein a tablet can be used as well as the powder, by merely crushing it. Those who, prior to the law, had been accustomed to using tablets of such drugs, whether the dispensing tablets of some manufacturers or the common triturate, instead of weighing the drug from the stock bottle, must have found this a very natural process by which to reduce their amounts of the uncalled for items. They, no doubt, have long since lessened their stock of such drug forms to what little is really needed since the law went into force.

Compactness of the stock of each article as to strength helps very much. For instance, portions of tubes of hypodermic tablets of the same strength should be put into as few full tubes as will carry them, to prevent reordering when there is enough at hand. This remark applies equally to other tablets and other forms of the substances.

Though it requires time to utilize large stocks by such methods, they will eventually be consumed, and, because these goods need not be restocked, that much capital conserved. To that end these materials must be kept well within memory, but to keep them so preëminent in our thoughts is a task indeed for anyone, since, in the rush of work, we are apt to be influenced more by vision than by memory and use that to which habit leads us. It will therefore be found better to take a physical means of facility, than to tax the memory.

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* Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., Chicago meeting, 1918.

A very simple reminder, which has been found thoroughly practicable, is to tie the bottles of the tablets, or other packages, to the container of the drug itself, so that the hand will not fail to find the article to be used.

If it is not advisable to mix lots, as previously suggested, tie all of the packages of the same strength to the container and always use the smaller lot first.

Not every prescription will permit of such use, and, though many do, none but appropriate uses are in mind; for deceit cannot qualify as conservation.

As an illustration of a proper use: An open package of a considerable quantity of one-eighth grain codeine sulphate triturates are to be reduced to near requirements. The bottle is accordingly tied to the codeine sulphate bottle, and, when the prescription comes in, calling for four grains of codeine sulphate in three ounces of Brown Mixture thirty-two of these tablets containing four grains of codeine sulphate (and some sugar or sugar of milk) are used. Following the utilization of the one-eighth grain tablets, others, such as one-sixth, one-quarter and one-half are used in the same manner, perhaps in succession, or, with the visible reminder to prompt the memory, these strengths may be thought of and used in preference, according to circumstances.

Thus, lot after lot of these needless items are reduced or entirely consumed and proper record made of the number and strength of the tablets so used along with any other data needed to properly check up the inventory.

This example of course extends to other tablets as well as to those of codeine sulphate.

Pills may likewise be used if reducible to powder. Gelatin coated pills are better suited for use in capsules since the material of the capsule itself, the final integument, is also gelatin.

The utilization of some of the other forms of the narcotics, which may be used in similar ways, is a matter for thought in each individual instance.

If kept in mind by one means or another, there will be found an occasional opportunity to utilize these substances, but the plan must pass the censorship of conscientious consideration.

IS RESEARCH WORK ALONG THE LINES SUGGESTED BY THE LAST REVISION OF THE PHARMACOPOEIA POSSIBLE OR PRACTICAL IN SCHOOLS OF PHARMACY?*

BY CHARLES S. CHASE, M.D.

The foregoing interrogatory is pertinent and timely, it seems to the writer of this paper. Pertinent for either of two reasons, and practical because the experience of the biological laboratories connected with the large drug manufacturing houses of our own and foreign countries has fully proven it to be so.

As to the first query, its pertinency. The fact that for more than a score of years wholesale manufacturers of drugs have found pharmacodynamics necessary in assaying all glucoside-containing drugs, and many others, discloses a field

* Read before Joint Session Section on Legislation, A. Ph. A., American Conference of Pharmaceutical Faculties and National Association of Boards of Pharmacy, Chicago meeting, 1918.

manifestly waiting for research pharmacists to visit and explore. A second reason touching its pertinency may be stated as the anxiety all practitioners of medicine, especially internists, always manifest with reference to the probable effects of the drugs they use therapeutically. The evidence even of percentage strength shown by chemically assayed drugs carries with it many times nothing further. It offers no suggestion to a practitioner that the presence of atropine in belladonna, for instance, in varying quantities may or may not produce certain physiological changes in the organism. This point is all-important to the practitioner, and should be, therefore, to the manufacturing or dispensing pharmacists who desire to efficiently serve him. What it might mean to those most vitally interested, the patients, becomes a matter of conjecture, not of certainty.

The graduate pharmacist, therefore, of the present day who desires to serve in the higher ranks of his profession should feel a strong impulsion toward post-graduate work. His work in such direction, further, should be elected with special reference to a well-defined course in pharmacodynamics. Such a course a graduate student in the College of Pharmacy of the University of Iowa elected at the beginning of the session of 1917–18. She chose as her minor what I will name as pharmaceutical pharmacology, selecting as her particular theme the corroboration of the U. S. P., as to the directed bio-assay of Cannabis. The methods followed were those laid down in the text, with two changes. One was with reference to a control, or comparison dose, of a known standard preparation of the drug; the other was in the use of but one animal, a dog. The animal was selected, however, with much care, having in mind constantly the desirable qualities of good nature, a quiet disposition, good health, and absence of timidity.

The second step in the experimental work was obtaining a preparation of the drug to be standardized of as great purity as could be obtained. This was done by seeking it from a manufacturer of acknowledged skill and care. A fluid-extract of the drug whose strength was to be ascertained was next prepared. A dose of this was selected arbitrarily, being 0.03 mil per Kg. wt. of the animal used. The same dose of the assumed standard, it should be observed, was used in the control experiment. The drug was well diluted with water and given the animal by means of a stomach tube. The end reaction in both the control and the tested drug was manifest incoördination, shown by lack of ability to longer support its head apparently, a drooping of same being present, and a spreading widely of the hind legs. Also a "lack of interest" in what was happening about him was plainly observeable, from a lively, very much interested animal he became an apathetic, uninterested and very indifferent one.

The symptomatology of the animal as to nervous conditions, the rate and character of the heart and respiration, the stomach (nausea, etc.), bowels, urinary organs, etc., etc., was closely observed and carefully recorded. The same routine was followed after three days, using the same animal and the same dosage of the same preparation. This was repeated for six consecutive periods each three days apart, after which a summation of the results was made and tabulated. The specimen under examination was shown by this physiological titration to be much inferior to the control, and a dose of about 0.045 mil was found to be needed to produce the symptoms shown after using the control. It should leave the laboratory, therefore, or the hands of a dispenser so marked.

A criticism might here be offered by an investigator with reference to having used but one animal in the experimentation, namely, that one in so doing would not have an opportunity to institute comparisons between several animals. To such objection it could be replied that a single animal used at stated intervals would be much less likely to cloud the results than would several with marked variations as to habits, power of resistence, or degrees of susceptibility, temperament, etc. This point, indeed, is well made in an elaborate criticism of the process by P. S. Pittenger, Ph.C., presented before the Scientific Section of the American Pharmaceutical Association, at its session at Indianapolis in 1917. (Biological Assay Method of the U. S. P., IX Revision. See JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, Vol. VI., No. 10. October, 1917.)

It may be observed, further, that it was required that the research should trace the complete history of Cannabis from the date of its appearance as a drug, and especially as an official drug, with its varying actions as noted by different observers; also that any hints as to its physiological action in the earlier days should be carefully noted and compiled. It is of interest to recall a statement found in the "Pharmacopoeia Londonensis, or the New London Dispensatory, 1682." It observes, speaking of its action, "That it cures the Cough and Jaundice, but fills the Head with Vapours." T. Lauder Brunton, three hundred years later, makes practically the same observation in reporting its action. The drug has therefore an ancient but not so honorable a history. It was found on the whole that the specimen under investigation maintained its reputation for effecting the results declared for so many centuries it would produce. It is known, of course, to this body; it is little used however by the medical profession. Such use in practice, as it has, is restricted almost exclusively to the profession of veterinary medicine.

It may not be improper, before closing, to remark that the prosecution of the research herein outlined was of such interest to the student who conducted it that she has requested the privilege of supplementing it during the approaching session of 1918–19. She asks for the opportunity to carry forward the recommendations of the Pharmacopoeia with reference to the other drugs named as worthy of verification by this process. Especially might it be worth while to attempt to standardize ergot, though neither mentioned nor recommended by the Pharmacopoeia. The usual process of discoloration of the comb and wattles of the cockeral as recommended by Worth Hale and others, seems to be accepted as a fairly good and accurate one, but it could disclose a possible Dale's paradox which might be disastrous, in an unfortunate combination of ergot and epinephrin for instance.

On the whole, therefore, it seems to the writer that it is well worth while for students of pharmacy to seek opportunities wherever and whenever they offer themselves to engage in original research work, if possible. Also it would amply repay them to be able to corroborate the percentage strength given on labels of original containers under certain conditions. Finally, the fields of opportunity along the lines suggested in this paper are full of such possibilities as would amply repay for one such services rendered.

THE DISTRICT OF COLUMBIA ADVERTISING LAW, ITS ENACTMENT, ENFORCEMENT AND SOME RESULTS.* WASHINGTON PLAN.

BY L. F. KEBLER.

The District of Columbia, like many other communities, has suffered from and is still afflicted with various forms of unfair advertising. The reader often discovers that he is victimized but usually find it out too late to act, or does not feel like making complaint because one seldom wants to admit that he has been imposed upon. The best class of merchants have for years realized the unfairness, both to business and the public generally, of all desceptive advertising, but found themselves handicapped to effect relief. The evil seemed to grow. The consumer became restless. Our merchants in self defense, found themselves compelled to use their influence against the growing evil.

The matter was taken up by the Retail Merchants Association. This organization for a time endeavored to carry out the reform through the efforts of its own membership. It was soon found that little progress was being made. In the latter part of 1915, a Vigilance Committee was organized consisting of a representative of the various civic bodies of the District and certain citizens, especially interested in honest advertising, together with five members of the association. The members of the Vigilance Committee serve gratuitously. The purpose of the committee is to study local advertising, receive and investigate criticisms, false advertising and unfair dealings. The committee early in its work decided to use moral suasion, as largely as possible, to bring about the results desired. All the work and experience gravitated toward the enactment of a law, which could be used to control the situation. At the instance of the Retail Merchants Association a bill was drafted with this end in view and submitted to the Chairman of the District committee, the Hon. Ben Johnson. Congressman Johnson did not consider the draft adequate. He therefore redrafted the bill, introduced and fathered it until it became a law. The need of a law to cover existing conditions was apparent to any one who gave the subject consideration. It did not take Congress long to see the necessity judging from the short time elapsing between the time of introducing the bill and its enactment into law, four months.

The law is entitled "An Act to prevent Fraudulent Advertising in the District of Columbia." The bill became a law May 29, 1916, and the two important sections 1 and 3, read as follows:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall be unlawful in the District of Columbia for any person, firm, association, corporation, or advertising agency, either directly or indirectly, to display or exhibit to the public in any manner whatever, whether by handbill, placard, poster, picture, film, or otherwise; or to insert or cause to be inserted in any newspaper, magazine, or other publication printed in the District of Columbia; or to issue, exhibit, or in any way distribute or disseminate to the public; or to deliver exhibit, mail or send to any person, firm, association or corporation any false, untrue, or misleading statement, representation or advertisement with intent to sell, barter, or exchange any goods, wares, or merchandise or anything of value or to deceive, mislead or induce any person, firm, association, or corporation to purchase, discount, or in any way invest in or accept as collateral security any bonds, bill, share of stock

* Read before Section on Education and Legislation, A. Ph. A., Chicago meeting, 1918.

note, warehouse receipt, or any security; or with the purpose to deceive, mislead, or induce any person, firm, association or corporation to purchase, make any loan upon or invest in any property of any kind; or use any of the aforesaid methods with the intent and purpose to deceive, mislead or induce any other person, firm, or corporation for a valuable consideration to advertising such services.

That any person, firm, or association violating any of the provisions of this Act shall, upon conviction thereof, be punished by a fine of not more than $500 or by imprisonment of not more than sixty days, or by both fine and imprisonment, in the discretion of the court. A corporation convicted of an offense under the provisions of this act shall be fined not more than $500, and its president or such other officials as may be responsible for the conduct and management thereof shall be imprisoned not more than sixty days, in the discretion of the court."

It will be noted that this is a rather inclusive law. The "knowing" element does not find a place. It covers every form of advertising, whether by newspaper, magazine, poster, placard, exhibit, circular, or otherwise. The Vigilance Committee adjusted numerous complaints of unfair advertising appearing in the windows, newspapers, etc., brought to its attention, even before the law became effective. In some instances it clearly developed that the management was not aware of the nature and character of the advertising being carried and willingly modified the advertising to comply with the facts.

The first case taken into court under the law was based upon advertisements appearing in the nature of placards, signs, etc., placed in the windows, and throughout the store. It covered men's clothing and supplies. Certain goods were advertised as being sold at a reduction, when as a matter of fact they were found to be of such a grade and character that the actual prices charged were more than they were regularly sold for. Standard brands of collars were included in the sale but if a prospective buyer sought to purchase them his size was no longer available and probably never was. The salesman would then endeavor to make a sale of another brand of goods. Pure substitution. The defendant was found guilty by jury trial, fined $300 and given a jail sentence of 60 days. The latter however was suspended by the court.

The second was different in character and consisted in advertising and selling at reduced prices the high-grade clothing of a merchant of standing and integrity. Concerning such a transaction no exception could of course be taken, but mingled with these goods were articles of low grade and character, not a part of the quality merchant's wares. As the stock diminished, constant supplies of low grade material were brought in to be sold as goods of the best character; sold at prices considerably in excess of those generally charged for this grade of goods at regular sales. The defendant's in this case resided outside of the District of Columbia and it was therefore necessary to serve subpoena on them at such time as they would be present in the District. The opportunities came. The parties in the transaction were taken into court. Three defendants finally pleaded guilty and were fined $100 each.

The third case covers advertising appearing in the newspapers of garments advertised as "natural wool" and "Australian wool," respectively. The "natural wool" garments contained from 50 to 89 percent of material other than wool. The "natural wool" garments represented by the sales-people as "all wool" consisted of only 45 percent of wool. The defendant and some of his witnesses contended that the color of the goods showed their nature and it was immaterial whether they contained 10 percent or 100 percent of wool. He furthermore testified that

he advertised and sold the goods in good faith; based on the representation and claims of the parties he had purchased them from. He did not seem to think that he was responsible for the claims and representations under which he sold his wares provided some one from whom he purchased the goods, at a sharp bargain perhaps, told him so and so. I fear such a claim would not get the druggist very far under present laws. If this principle should be sustained by the higher courts, the consumer would certainly be in an unfortunate predicament. Part of the Court's instructions to the jury follows:

"The jury are instructed that the defendant is on trial under the Act of Congress to prevent fraudulent advertising in the District of Columbia, and that it was not intended by the Act to charge an offense against a merchant who bought goods from a manufacturer or wholesaler and advertised or caused them to be advertised in the same way and manner as they were represented by the manufacturer or wholesaler at the time of said purchase, provided he honestly believed and had cause to believe the said representation to be true. And the jury are therefore instructed that if the defendant advertised the said goods as the same were represented at the time of the purchase from the manufacturer or wholesaler and he believed and had reason to believe the said representation to be true, then their verdict should be not guilty."

The jury found for the defendant. This interpretation of the Act is not considered good law in may quarters. It has in it the element of "knowingly," fraught with so much danger, in the laws enacted years ago. In fact it has long since been recognized that no law with this element in it, can be successfully executed in the interest of the public.

Let us now turn our attention to medical advertising. It is well recognized that this form of advertising presents some of the most difficult problems encountered by those interested in truthful advertising. False and fraudulent advertising accompanying the package is now quite well covered by the various Food and Drug laws, but such advertising is not reached by these laws where it appears in newspapers, circulars, magazines, posters, and otherwise, excepting in a restricted sense.

Soon after the organization of the Vigilance Committee and before the local advertising law was passed, a drastic criticism was received regarding the character of the medical advertising carried in the local newspapers. The communication was referred to a special committee for investigation and report. On April 25, 1916, this special committee submitted its report to the general committee. This report was referred to a second special committee for further consideration and final recommendation. This second committee reported back favorable action on the original report which was unanimously adopted. The essential features of the report follows:

The business of a goodly number of the so-called patent medicines has been built upon the credulity of the public especially the suffering sick and susceptible, by some of the cleverest and most ingenious advertising. Truth and honesty were often and still are lost sight of. In fact truth became such an unknown quantity in may instances that various promoters of nostrums seemed to vie with one another for supremacy in the realm of fairy tales. For example, a certain professor with a weak solution of salt and sugar dropped in the eyes, promised to cure consumption, paralysis, Bright's disease, cataracts, the morphine habit, and anything else the son of man may be afflicted with. His income was about $150,000 a year. He is now serving time. In another instance a half ounce of

flavored vaseline, sold for a dollar, on the basis that it would remedy all defects of the eye. A third claimed to cure cancer, typhoid fever, consumption, scarlet fever, etc., by the laying on of various shaped packets filled with clay and charcoal. It is sad to relate but true, that those least able to pay, the poor, bear the burden of these gigantic frauds. These people seem to bite most voraciously at any sugar-coated bait. The tricksters can make a great market for a watery solution of salt and sugar, by using big words, extravagant words, mysterious words.

The newspapers play a very important part in disseminating information on the subject under consideration. Some are inclined to criticise these publications rather harshly. It is not believed however that a wholesale attack would be productive of the greatest good. That some censure lies, all will admit. There is room for improvement.

There are approximately 25,000 patent medicines advertised and sold in the United States and it is undoubtedly true that the management of any paper would find some difficulty in deciding what secret medicine advertisement is or is not within the realm of truth.

The "Specialist?" A multitude of sins are covered by the term "specialist." It is frequently used to work the unsuspecting public. Ignorant young men and old men are their special prey. The former is frightened because of the manifestation of certain physiological functions and the latter is promised the restoration of certain lost powers due to advancing age. Some one will say: "The poor fools ought to be stung." Let us not judge them without due evidence. Most people have or have had utmost confidence in the doctor. He to many, seems like one having superior knowledge and power. They appear to be like little children in these matters. Some of these so-called specialists are specialists about everything from the social diseases to pulmonary tuberculosis, diabetes, etc. Recently a case of pulmonary tuberculosis in the last stages came under observation. There was no ray of hope left. She had been treated by one of these men until all money was gone. Then she was cast off to die or left on the hands of some one more charitable.

The advertisements of "Blood Poison" specialists are generally so vile, repugnant and often salacious, that they should not find a place in any paper that reaches the fireside of any home. Think of such material falling into the hands of adolescant boys and girls who will make diligent inquiry. What impression it must leave! What idea must these young folks gain of the morals of the world? How they must picture in their minds the character of the editor of the paper or Mr. Merchant whose advertisement is found by the side of such material. "Damaged Goods" must be holy to them in comparison. The diseases commonly known as "Blood Poison" can be as a rule successfully treated, but such treatment can not be satisfactorily accomplished by mail. The disease leaves in its wake such frightful results that any physician who lightly treats a case has missed his calling and it would be far better for the community to either have his license revoked or have him placed where he no longer would be a menace to the public. The character of these men usually is such that they care little for the unfortunate victim after their shekels are gone. They have no feeling for their fellow-man.

It is sometines difficult for a paper to decide what course to take. There are at least two ways out of the dilemma, and they are either to refuse all advertisements of a medical nature, or enlist the services of those who are competent to judge. The necessity of either of the above courses of action might be considered arbitrary and domineering and not productive of the best results. It is therefore suggested that the following seven rules be adopted as a tentative working basis.

1. Investigate the nature and character of the business and forces behind it.

NOTE: Interrogate the prospective advertiser from the view point of the consumer and your patron. Does he come with clean hands? A few questions will usually determine the nature of the business.

2. Get some idea as to the virtues of the medicine and the ingredients supposed to impart these virtues.

NOTE: If the prospective party submits copy claiming to "cure diphtheria" ascertain what is in the product that will effect this "cure."

3. Refuse all advertisements bearing claims and representations which mislead or deceive the consumer, or are liable to bring him injury, whether by direct or indirect statements or testimonials.

NOTE: There is no drug or mixture of drugs known to the medical profession which will cure tuberculosis. It will therefore be false to say (direct statement) "It will cure consumption." "An infallible cure for consumption." If the direct claims are without foundation, it would be equally deceptive to mislead the unfortunate sick by indirect statements, such as, "Valuable for tuberculosis." "Has cured tuberculosis," or by means of a testimonial, authentic or otherwise. The manner of propagating the falsehood is immaterial.

4. Reject any advertisement for any medicine which claims the medicine to be a "cure" or "infallible cure" or "unfailing cure," etc., or a remedy for any disease or condition for which the medicine is not a cure or remedy in truth and in fact.

NOTE: The following are some of the diseases or conditions which cannot be cured by any drugs at present known: Arteriosclerosis, asthma, Bright's disease, cancer, cataract, drunkard's liver, epilepsy, infantile paralysis, locomotor ataxia, paralysis, pellagra, pneumonia, whooping cough, yellow fever.

5. Refuse advertisements for mail order treatments or treatment in absentia.

NOTE: Diseases cannot be correctly diagnosed in the absence of a patient. It is sometimes almost impossible for the skilled physician at the bedside with every possible facility, to make a correct diagnosis.

6. Refuse all advertisements that offend the home, the reader or the clean, honest advertising merchant.

NOTE: The home is the most sacred institution. It is the best patron of the press. The columns of the press should be as free as possible from anything that defiles this institution. Clean advertisers do not relish the idea of having their advertising matter displayed by the side of vile, degrading, salacious matter.

7. In case of doubt, consult some one able to decide.

A committee was appointed and instructed to interview the management of the various papers and advise them of the findings of the Vigilance Committee, with the suggestion that they consider discontinuing carrying advertisements of a character adverse to the report. Each and every manager agreed willingly

to eliminate the advertisements as fast as practicable. Many of them did so. The idea of practicality apparently did not however present itself in some instances. Complaints that the papers were not acting in good faith were received. Some members in the drug trade became uneasy feeling that it was unfair to them to have their business connected or associated with many of the deceptive advertisements appearing in the papers. A special conference was called to which representative druggists were invited. The conditions obtaining were fully considered. This conference resulted in the appointment of a committee on Medical Advertising, consisting of two druggists, two physicians and an attorney. The committee was given authority to look into the nature and character of medical advertisements appearing in the newspapers, circulars, posters, magazines, etc., circulating in Washington. Numerous meetings were held. It was early decided that the function of the committee was false medical advertising and not an attack on patent medicines. No objection would be made to any medicine that made its way on honest advertising or did not work injury to the public. It was considered advisable to direct efforts along certain lines. Those liable to bring injury were first considered. The second line included the so-called "Prescription Scheme Products." It was decided to enlist the assistance of the drug trade, generally. A member of the committee appeared before the Retail Druggists Association and advised the organization of the findings of the committee, and asked the cooperation of the retailers in this matter. It seemed to be simply a question of the druggists voluntarily assisting in eliminating certain abuses or having outsiders step in and do the work, possibly not to their advantage. The organization voted unamiously to support the committee on medical advertising and act on its recommendation, as rapidly as possible. The association claimed that some of the undesirable business was thrust on them by the ads carried in the papers. If the papers did not carry certain ads no demand for certain questionable medicines would exist.

The next step was to advise the newpapers of the above action and attitude of the druggists with the suggestion that no advertisements be carried which will tend to bring reproach on the business. With some exception the local papers have assisted in improving conditions.

A special case illustrating the work of the committee was that of an advertisement being circulated by a party regarding an alleged radium preparation. It was advertised as a radio-strontium product having miraculous power for the curing of many human ailments. The case was carefully prepared and ready to be taken into court. The defendant realized his guilt, appeared before the Chairman of the committee and promised that he would discontinue the business if he was not taken into court. The Chairman, acting upon the general workings of the committee advised the party in question to put his promise in writing and the matter would be taken up by the committee at its next session. This was done and after due deliberation the committee voted to discontinue further action provided good faith was shown, and the business discontinued as promised. So far as it is known the business has been discontinued and the object of the law attained.

The psychology of untruthful advertising presents many angles. The ultimate goal is the "almighty dollar." The bars of restriction are often thrown down and full rein given to the wildest flight of get-rich-quick fiction. Some frankly

admit that the methods are unfair to the reader but attempt to justify them on the ground that they bring desirable financial results to the advertiser; in other words, "The end justified the means."

It is fully realized by some that the results do not tally with the promises. Others in man to man talks will you tell that their methods are not only dishonorable but distasteful to them. The newspapers are looked on as accomplices in the business. The flamboyant style of advertising is defended on the ground that it keeps a certain industry, city or state before the public. It is fortunate that there are very few persons who act along the above lines but it behooves the buyer nevertheless to excerise caution in purchasing.

DISCUSSION.

JACOB DINER: One of the New York daily papers took up the matter of deceptive advertising, and now whenever a case of misrepresentation is reported the papers confer with the merchants, and in the majority of cases they come to an adjustment. When they fail to do so they publish the facts, and this is quite a severe punishment. There has been a law passed in New York, which is being rigidly enforced, relating to the advertising and sale of remedies intended for the treatment or alleged cure of venereal diseases. That law is very drastic. It not only prohibits the advertising of such remedies, but prohibits the handling of them. The Washington plan, as outlined by Dr. Kebler, is the most comprehensive I have heard of.

M. E. DORSEY: With reference to the venereal law of which Dr. Diner spoke, the subject is coming before the public in a general way. It seems to me this Section should make a recommendation to the Council. A state law is all right but without federal enactments a state law will not be very effective. Such medical advertising should be stopped by the Post Office Department refusing the mail service to papers carrying this kind of advertising, otherwise the restriction will be local. National advertising of this character should not be permitted and the Associated Advertising Clubs of America can help to this end. When national advertising of these remedies is cut out the problem is solved. In our city, Ottawa, we have taken from our shelves every remedy for the treatment of venereal diseases. The War Department has asked that, and I think it is proper and right.

L. F. KEBLER: In order to stop the indiscriminate sale of venereal remedies publicity must not be given in the advertising columns of the newspapers. The public will ask for these preparations as long as they are advertised.

M. E. DORSEY: I move the adoption of this resolution:

> Be It Resolved, that the Committee on Legislation of the American Pharmaceutical Association be instructed to take up with the War Department at Washington the control of advertising pertaining to venereal diseases, and use their influence with the Associated Advertising Clubs of America to entirely eliminate from the daily and weekly press all advertising pertaining to venereal diseases.

(After some discussion this motion was carried and referred to the Council.)

HOW CAN COÖPERATION BE SECURED BETWEEN STATE MEDICAL AND PHARMACEUTICAL BOARDS FOR JOINT CONTROL OVER THE PREPARATION, DISTRIBUTION, PURITY AND SALE OF DRUGS?*

BY F. E. STEWART.

Manifestly, state medical and pharmaceutical boards cannot excerise control over the preparation, distribution, purity and sale of drugs, except indirectly, by coöperating with the national and state authorities having charge of the

* A reply to Query No. 21 of the Section on Education and Legislation, A. Ph. A., and presented before joint session of this Section with the American Conference of Pharmaceutical Faculties and the National Association of Boards of Pharmacy, Chicago meeting, 1918.

enforcement of the national and state pure food and drug laws. These laws provide machinery for their enforcement, and no persons or association of persons can have any authority to enforce these laws or use the machinery provided for the purpose except those who are legally empowered to do so. Therefore, the query might more appropriately read: "How can coöperation be secured between State Medical and Pharmaceutical Boards, and the authorities having charge of the Enforcement of the National and State Pure Food and Drug Laws, for the purposes of Exercising Control over the Preparation, Distribution, Purity and Sale of Drugs?"

The "Food and Drugs Act, June 30, 1906" is entitled: "AN ACT for preventing the manufacture, sale or transportation of adulterated or misbranded or poisonous or deleterious foods, drugs, medicines, and liquors, and for regulating traffic therein, and for other purposes." "Query No. 21," as above revised, is in harmony with the objects of the National Pure Food and Drug Law; as defined in the title of the act, and, as the State laws are patterned after the national law, it is in harmony with state legislation on this subject also. To properly answer the query, therefore, a comprehensive study of the national and state pure food laws would be necessary to prepare us to consider how state medical and pharmaceutical boards can coöperate with the constituted authorities.

The limits of this paper will not permit anything more than a brief statement of some of the methods by which such coöperation may be secured.

Let us first consider the meaning of the word coöperate. As defined by Webster's dictionary, the word "coöperate" means, "To act or operate jointly with another or others; to concur in action, effort, or effect." One of the great difficulties in securing coöperation between interests of physicians and pharmacists is want of recognition of the fact that pharmacy is an important branch of medical science and practice, and both are engaged in the same business. The physician sells his advice for money, and the pharmacist sells drugs. To that extent both vocations are commercial. But the sale of drugs by the pharmacist and of advice by the physician only represents what each is doing for a living. It is also necessary to consider the negative side, *i. e.*, what each is *not* doing. Both must refrain from doing things that injure the business of the other before there can be coöperation between them. The field of the physician is to diagnose the disease and prescribe the remedy, that of the pharmacist to select, prepare, preserve, compound and dispense the remedy of a drug or combination of drugs. Neither should poach on the preserves of the other. There seems to be no way of defining the boundary line between the field of the pharmacist and physician in this regard. Possibly, it might be accomplished by establishing neutral territory between them—a kind of buffer state like Switzerland is and Belgium was. A limited line of open formula household medicines, chosen by the medical and pharmaceutical professions coöperatively, is suggested. The U. S. P. and N. F. contain a sufficient variety of simples and compounds to make up such a list. Pharmacists might carry a line of such remedies in stock ready-made, put up in cartons with properly worded and censored circulars enclosed, giving accurate information as to their indications and uses.

The word "coöperate" also means, "to associate a number of persons for their common benefit." How can the several parties associate themselves to-

gether for their common benefit in the enforcement of the national and pure food laws? The practice of medicine and pharmacy and drug-therapeutics have a common object, that is to prevent, mitigate, and cure disease. To the extent that physicians and pharmacists coöperate in carrying out this object their common interests and the interests of the public are benefitted. The plan, therefore, should be one for securing coöperation between the State boards of pharmacy and medicine, representing the medical and pharmaceutical professions, with the pure food and drug authorities for promoting the public health by extending definite aid to the constituted authorities having charge of the enforcement of the national and State pure food and drug laws.

The first step in the process of enforcing the pure food and drug laws consists in the establishment of standards for determining the identity, purity, quality and strength of the materia medica products and preparations on the market. This step was taken by Congress and the legislatures of the several States of the Union when they made the United States Pharmacopoeia and National Formulary legal standards for the medicinal drugs, chemicals, and preparations of the same included in their pages. Coöperation for the purpose of enforcing these standards is of the greatest importance in securing the object we desire to obtain.

Standardization of State laws to conform with the national pure food and drug law is also important. Conflicting laws have rendered conditions intolerable.

But there are many preparations on the market advertised in the newspapers or medical journals or both claiming to be therapeutic inventions or discoveries for which no standards have been established. Some of these preparations are doubtless worthy of a place in the United States Pharmacopoeia or National Formulary, while some of them represent nothing except pretense to therapeutic values not in fact possessed. The next step in standardization would be for the representatives of the medical and pharmaceutical professions to cooperate for the standardization of medicinal drugs, chemicals, and preparations not included in the United States Pharmacopoeia and National Formulary. This step in the process of standardization would separate the wheat from the chaff.

This means legislation to do away with secret medicines altogether. People who take medicine on their own responsibility should have the privilege of knowing what they are taking that they may consult physicians or medical books and use the medicines advisedly.

The next step would be coöperation for the enforcement of the Sherley Amendment to the Pure Food and Drugs Act relating to misleading advertising, and in this way get rid of the chaff. The following announcement relating to the Sherley Amendment was published by the Bureau of Chemistry, U. S. Department of Agriculture, August, 1914:

"Suggestions for labeling medicines under the Sherley Amendment to the Food and Drugs Act, June 30, 1906. The Bureau has received many inquiries relative to the proper labeling of medicinal preparations in compliance with the requirements of the Food and Drugs Act, as amended by the act of August 23, 1912, commonly known as the Sherley Amendment."

The following suggestions are offered to manufacturers or proprietors of such preparations to serve as a guide in the preparation of labels:

"*1. Claims of Therapeutic Effects.*—A preparation cannot be properly designated as a specific, cure, remedy, or recommended as infallible, sure, certain, reliable or invaluable, or bear other promises of benefit unless the product can be a matter of fact depended upon to produce the results claimed for it. Before making any such claim the responsible party should carefully consider whether the proposed representations are strictly in harmony with the facts, in other words, whether the medicine in the light of its compositions is actually capable of fulfilling the promises made for it. For instance, if the broad representation that the product is a remedy for certain diseases is made, as, for example, by the use of the word "remedy" in the name of the preparation, the article should actually be a remedy for the affections named upon the label under all conditions, irrespective of kind and cause.

"*2. Indirect Statements.*—Not only are indirect statements and representations of a misleading character objectionable, but any suggestion, hint, or insinuation, direct or indirect, or design or device that may tend to convey a misleading impression should be avoided. This applies, for example, to such statements as "has been widely recommended for," followed by unwarranted therapeutic claims.

"*3. Indefinite or Sweeping Terms.*—Representations that are unwarranted on account of indefiniteness of a general sweeping character should be avoided. For example, the statement that a preparation is for "kidney troubles" conveys the impression that the product is useful in the treatment of kidney affections generally. Such a representation is misleading and deceptive unless the medicine in question is actually useful in all of these affections. For this reason it is usually best to avoid terms covering a number of ailments, such as "skin diseases, kidney, liver, and bladder affections," etc. Rheumatism, dyspepsia, eczema, and the names of many other affections are more or less comprehensive, and their use under some circumstances would be objectionable. For example, a medicine should not be recommended for rheumatism unless it is capable of fulfilling the claims and representations made for it in all kinds of rheumatism. To represent that a medicine is useful for rheumatism, when as a matter of fact it is useful only in one form of rheumatism, would be misleading; such statements as "for some diseases of the kidney and liver," "for many forms of rheumatism," are objectionable, on account of indefiniteness.

Names like "heart remedy," "kidney pills," "blood purifier," "nerve tonic," "bone liniment," "lung balm," and other terms involving the names of parts of the body are objectionable for similar reasons.

"*4. Testimonials.*—Testimonials, aside from the personal aspect given them by their letter form, hold out a general representation to the public for which the party doing the labeling is held to be responsible. The fact that a testimonial is genuine and honestly represents the opinion of the person writing it does not justify its use if it creates a misleading impression with regard to the results which the medicine will produce.

"No statement relative to the therapeutic effects of medicinal products should be made in the form of a 'testimonial' which would be regarded as unwarranted if made as a direct statement of the manufacturer.

"*5. Refund Guarantee.*—Statements on the labels of drugs guaranteeing them to cure certain diseases or money refunded may be so worded as to be false and fraudulent and to constitute misbranding. Misrepresentations of this kind are not justified by the fact that the purchase price of the article is actually refunded as promised."

It is evident from the above Announcement of the U. S. Department of Agriculture that the Sherley Amendment ought to be embodied in the various state pure food and drug laws, and properly enforced by the coöperative efforts of the state medical and pharmaceutical boards, working with the authorized agencies having charge of the enforcement of these laws. The Sherley Amendment might then be used as an effective sieve for separating the pharmaceutical wheat from the nostrum chaff which takes up so much valuable space on the shelves of drug stores throughout the country.

The next step in carrying out a coöperative plan for "controlling the preparation, distribution, purity and sale of drugs," would be the standardization of the alleged new therapeutic inventions now being so extensively advertised by the

great chemical houses engaged in the pharmaco-chemical industries. The commercial introduction of some of these products represents one of the worst forms of the nostrum evil. The nostrums to which I refer are first advertised in the medical journals to fool the doctor, then advertised in the newspapers and other periodical literature to fool the people. The doctor and druggist become the cat's paw for raking the chestnuts out of the fire. As the public is injured rather than benefitted by using these products promiscuously for self medication, the patent law protecting capital invested in their manufacture, advertising, and sale, is being perverted. The object of the patent law is to promote progress in the science of the materia medica and in the practice of the useful arts of pharmacy and drug-therapeutics, not to protect and foster a commercial business in medicinal products carried on in unfair competition with educated and licensed practitioners of medicine and pharmacy. Coöperation between medical and pharmaceutical State boards for correcting this evil would do more for legitimate pharmaceutical practice than all the other methods of coöperation ever suggested.

We need a coöperative method for introducing new and useful medicinal drugs, chemicals, and preparations of the same to science, and brands of the same to commerce. The co-partners in this plan should include representation from the great manufacturing houses engaged in the legitimate pharmacal and pharmaco-chemical industries. They should be invited to coöperate in giving the medical and pharmaceutical professions, and the public, a square deal. If they refuse to coöperate in doing so, laws should be passed and enforced to put them outof business. This is the tendency of the pure food and drug laws, the anti-narcotic laws, the medical and pharmaceutical license laws, and other similar legislation now under the consideration of political economists. That is why certain houses opposed to square deal object so strenuously to what they call "attempts of the government to dictate to them how do to their business. What is the Government for except to see to it that the people get fair play?

New materia medica products and preparations should not be introduced by advertising. Advertising should be confined to brands of products, leaving the products themselves open to competition and introduction to science by the coöperative investigations of medical, pharmaceutical, and chemical scientists. Therapeutic advertising is particularly objectionable. Therapeutic verdicts of judicial character can only be obtained as the result of original research by competent observers conducted under conditions of environment which eliminate as far as possible errors due to the personal equation and differences of climate, race and social conditions. Persons engaged in the sale of advertised products are not in a judicial position. Consciously or unconsciously they are biased in their judgments in favor of the products they advertise for sale. The same applies, possibly in a less degree, to research workers who advocate new methods of treating disease. Both classes of introducers occupy the position of advocates, not judges. What they say in favor of the products they are advocating and against the products of competitors, must be received *cum grano salis*, no matter how honest their intent.

The bias of the commercial introducer is in direct proportion to the amount of capital he has invested in advertising the product for sale. For that reason the building up of great commercial monopolies in the manufacture and sale of alleged new therapeutic discoveries, under the protection of the patent and trade-

mark laws, should never be permitted. The only legitimate demand for medicines is that created by their proper use in the practice of competent physicians, aided by the investigations of the laboratory workers, and reported in the professional societies where their merits can be impartially discussed. Each alleged discovery must be compared with prior discoveries before it can be decided whether the old should give place to the new. The decision should not be influenced by monetary considerations. Much of the demand created by advertising is purely fictitious and immediately commences to diminish when the advertising ceases. The exploitation of the sick room for gain is a crime against humanity that ought to put those guilty of it behind the prison bars. Coöperation between the medical and pharmaceutical State boards for the purpose of putting an end to this crime would be in harmony with the altruistic ideals concerning which the medical and pharmaceutical professions are so fond of boasting.

CONCLUSIONS.

State medical and pharmaceutical boards can coöperate in the joint enforcement of the laws for controlling the preparation, distribution, purity and sale of drugs, in many ways: Following are some of the ways:

1. By a joint study of these laws and regulations for their enforcement. Joint meetings should be held for that purpose.

2. By suggesting improvements in the laws and regulations for the purpose of harmonizing them more closely with the scientific and professional requirements essential to the proper practice of pharmacy and drug-therapeutics as coördinate branches of medical science and practice.

3. By insisting that druggists and manufacturers shall observe the suggestions in regard to the labeling and advertising of medicines contained in the Announcement issued by the U. S. Department of Agriculture relating to the Sherley Amendment to the Pure Food and Drugs Act of June 30, 1906.

4. By reporting violations of these laws to the constituted authorities and following up their complaints to see that they are properly considered and acted upon in every case.

5. By bringing cases of violation to the attention of the State and county medical societies, also to the national medical and pharmaceutical societies, so that members of these societies may be placed in position to recognize and distinguish between the sheep and the goats when purchasing materia medica supplies or writing prescriptions.

6. By teaching physicians and pharmacists through the medium of their societies the necessity of standardization as applied to the materia medica thus making them realize the importance of the United States Pharmacopoeia as a guide to prescribing and ordering supplies.

7. By insisting that medical and pharmaceutical schools and colleges shall teach their students the rules of conduct which should guide them in their relations to each other as physicians and pharmacists; also in regard to their relations to the public as practitioners of correlated and mutually dependent medical arts.

8. By teaching physicians and pharmacists to cease acting as sales agents for nostrums of all kinds to the extent that it is possible under existing conditions to do so, remembering, on the part of physicians, that in case pharmacists should throw their nostrums out of stock to-day, they would be forced to put in new stock before night to meet the demands of the medical profession, and remembering, on the part of the pharmacists, that physicians who do their own dispensing, are often induced to do so because the druggists in their vicinity refuse to give the public proper pharmaceutical service preferring to recommend their own nostrums, and the nostrums of others, to their patrons, rather than confine themselves to the legitimate practice of pharmacy.

9. By exerting their influence as boards of medicine and pharmacy upon Congress to secure proper revision of our patent and trademark laws so that they can no longer be employed to protect and foster a commercial drug business carried on in unfair competition with educated and licensed practitioners of medicine and pharmacy.

CAN THE RETAIL DRUGGIST CONTINUE AS A MANUFACTURER?*

BY FRANK T. STONE.

In many ways Washington occupies the most unique position of any city in the United States. In 1878 Congress in its wisdom voted us out of a vote and we therefore have no suffrage. I will not discuss the reasons here. In a measure we are wards of the Government; Congress adopts a paternal attitude toward us, and passes all laws governing Washington and the District of Columbia. Many who live and conduct business here feel that we are the "most" governed and best regulated city in the world.

You are familiar with the great National movement culminating in the passage of the Food and Drugs Act in 1906, giving three departments of the Government supervisory power over food and drugs. The Department of Agriculture with its corps of brilliant chemists assuming the duty of inspection, testing for purity or impurity, with the power to enforce the law, reaches out with its strong and impartial arm to every nook and corner of the country.

You of the States no doubt have personally had experience with this legislation in one way or another and profited by it. We know we have in the District of Columbia, because we have been up against double-barreled inspection from 1906 to this minute. Many of the practices of the past are now the exceptions and the exercise and enforcement of this beneficent law has resulted in striking changes, advantageous to the public and the retail druggist alike. If you of the States have not been forcibly impressed with its operation you will, sooner or later, come to recognize its virtue.

Immediately accessible to the Department of Agriculture, the District of Columbia undoubtedly provided a fertile field for testing this much-needed law, with the result that changes were recommended and made with regard to the compounding of many of the so-called simple and semi-complex preparations, and their accuracy insisted upon under penalty of the law. I want to say before proceeding further, that the deductions herein presented are drawn, not only from my own personal observation, but also from the experiences of others who have had occasion to know the extent of the laws' operation under executive authority.

If the painstaking proprietor who has successfully conducted a well-regulated drug store for ten or fifteen years could give his time to making his own preparations, there is little doubt in the writer's mind that his store would not be a favorite place for Dr. Kebler's inspectors, for collecting samples prepared for human ailments. In the retail store doing a daily business of $100.00 or over the proprietor is bound to pass on much of the detail, and usually the manufacturing of simple preparations, to clerks, in many instances irresponsible clerks—men who will always remain in that capacity because of the lack of ambition and energy to seek a higher level in the profession.

The druggist of the District of Columbia is very nearly the average druggist, or was up to 1906. Since that day, many vicissitudes have come his way. Members have received citation from the Department of Agriculture to show cause

* Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., Chicago meeting, 1918.

why their preparations differed from the formulas of the U. S. P. and N. F. For example: If in 100 different stores as many individual clerks, of varying degrees of ability, make an equal quantity of the same preparation under conditions peculiar to their locality, it is quite certain that some of the products will vary materially from the proper standard even assuming that their supplies are derived from one and the same source and are in themselves of proper quality. That this variation is likely to be in excess of 20 percent on one or the other side of the correct strength in a relatively large number of instances reference to collections and analyses of samples of simple and complex products has demonstrated over and over again, not only in the District of Columbia, but elsewhere.

It is futile to say that another clerk or the proprietor should assay or test qualitatively and quantitatively each preparation made, though obviously this could readily be economically done for the entire 100 pints or gallons if made in one operation, at one time, and by one operator. I do not mean to imply that assaying or otherwise standardizing is not advisable. On the contrary, no one is more desirous of dispensing a standardized preparation than the pharmacist, but can he do it under the conditions found in the average store and make and standardize them on the premises? Practically, he can not.

How many pharmacists have the necessary facilities and technique to standardize the assayable tinctures of the Pharmacopoeia? Even experts arrive at materially different results with many of the processes, and commercially well-known makes of many of them are physiologically as well as chemically tested before marketing—an improvement, even if super-pharmacopoeial.

Again, under stress of war conditions, the reduced amount of available competent labor in retail stores tends to eliminate any work that can be as well or better done on the large scale. Even in normal times it is easily demonstrable that the waste of time, energy and material in preparing 100 gallons of such a useless preparation as tincture of arnica by 100 different clerks in as many separate establishments makes it an economically unsound procedure when compared with making the 100 gallons at one time and at one place. At current prices for arnica flowers and alcohol, the futility of it is obvious. Who now makes his own tincture of nux vomica—even under the procedure of the two previous editions of the U. S. P.? Was not the maker of the powdered extract the real manufacturer? Can you beat a machine for making pills or seidlitz powders?

The theory of standardization is fast becoming a necessary commercial practice—necessary because it makes for economy and efficiency. Nowhere is the value of coördination more clearly shown than in the conduct of the present war. Not only has the Government standardized American products wherever possible, but in some striking instances the standardization has been extended to conform to the requirements of the Allies as well, making the use of one device and parts of devices interchangeable. By this method the highest efficiency in the conduct of the war has been obtained.

Prior to the war many large business establishments, maintaining retail stores throughout the country, had already begun standardizing their preparations with resulting economy and accuracy and shipping these preparations from one central producing plant to all their distributing points, so that the quality of a given product would be almost identical, whether purchased in New York or San Francisco, Chicago or New Orleans. Thus not only was economy effected,

but time, labor and the possibility of wide variation in the quality of preparations were avoided, with attending local, state or federal penalty.

From past experiences most of those present will doubtless recognize the desirability of encouraging the responsible manufacturers in the movement they have undertaken—a movement which relieves the individual druggist of responsibility for accuracy and at the same time assures a uniform and standard product to the public. Just how far such a movement will succeed depends largely upon the retail druggist. If his time can be more profitably devoted to the local manufacture of such preparations, undoubtedly he will continue as at present, but it is my opinion that no busy man can afford to devote his time to their manufacture or supervise and assay compounds prepared by his clerks, in order to be assured of accurately prepared products in conformity with the law. The logical alternative seems to be the encouragement of the large and responsible manufacturers who are properly equipped to produce standard and uniform preparations with infinitely less expense in comparison with the facilities of the retail druggist, the time invested and the small profit accruing from his labors in this field.

THE PHARMACIST'S OBJECTIVES.

BY MRS. H. R. KENASTON.

This brief outline offered upon the subject selected is designed primarily as a prelude to the discussions that may follow rather than any effort on the part of the writer to give an extended delineation of the possible results that will most assuredly be the reward of those in the profession who may elect to continuously seek progress in the profession of pharmacy.

Further, it is assumed that adequate collegiate training has preceded the legal recognition essential to the practice of pharmacy. Equipped with the legal rights and the protection conveyed with the same, it should be the aim of the pharmacist to practice the profession in its phases of adaptability of all that this right conveys and the objectives be to excel in one or more definite and clearly defined lines, selected and specialized upon, to the extent that a more or less perfected practice may be attained.

Many are the thoughts and intense are the feelings that rush to the young pharmacist's mind and grasp the soul, leading onward and ever upward in the conquest of life, but out of the wierd variety and multitude of possibilities, there are two that are preëminently important—the feeling of happiness and ambition—the joy of having attained certain professional standings, and the ambition to excel until the goal toward which the mind has directed effort has been the nearer and nearer at hand.

Every pharmacist must aspire to establish greater professional efficiency from day to day; the ardor of this aspiration should increase by added efficiency, looking toward the highest possible degree of professional service and scientific research work to the end that some new truth may be made known to the members of the profession, the benign crowning of a task strenuously followed to a successful end and that the world may have the benefit of an added truth, snatched from

* Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., Chicago meeting, 1918.

Nature's wealth of unknown values and applied to the economic advancement of the scientific world.

The sublime heights to which scientific pharmacy may ascend should beckon the members of the profession to their utmost efforts that each may offer some tribute to its advancement. Talent and education are empty names if permitted to remain dormant; to be real they must be brought into action, and their forces combined in the greatest benefit to humanity and to life itself.

Of what avail would have been the discovery of vaccination without its use in protection against suffering and death? How great the original truth presented to the world, yet how small in comparison if the smallpox vaccination had been the only one adapted to the economic forces of the nations of the world.

Comparatively considered, the value of any of the advances to the profession has been wonderful, but how much more wonderful has been the adaptability of scientific research work to multiplied phases of the medical and mechanical requirements and adapted to the conditions that are responsible for their existence and value both scientifically and commercially.

If the members of the world of pharmacy are a student body as they should be, and the individual effort is given to meet the requirements of the medical profession, it is clearly ethical that this information be given the medical profession. Advise the prescribing physician that the pharmacist is informed and that he can and will meet the most fastidious wishes of the physician. Every pharmacist should assume the burden and privilege of elevating the standard of the profession to the end that his best in professional skill, courteous treatment of all patrons and customers, quality of the product dispensed and adequate commercial management be ever maintained and that efficiency in the various phases of the profession comprise the sum total of his or her professional career.

In view of the existing conditions resulting from the changed commercial relations because of the war, and the extraordinary conditions have developed an increased demand for the highly trained member of the profession, the compelling necessity has shaped into results many of the semi-dormant sources of production giving to American manufactured chemicals and drug products a market not formerly existing to the same extent; scientific pharmacy with the accompanying commercial advantages has been noticeably stimulated.

The field of practical pharmacy has the honor to place many stars on the great American Service Flag. Those who have been called to the colors represent many of our most talented and highly educated members. Their places must be filled—the colleges and universities must provide for the main part of the research work, because of their ability to meet the requirements, and the fact that the average retail pharmacist could not, if he would, because of the lack of facilities, and if equipped, fails in many of the essential requirements; however, the retail pharmacist has a great part to play and is absolutely a requisite factor in this body pharmaceutic.

The economic value of all research work is evidenced by application in practical, useful methods and it is through the retail pharmacist that the public receives many of its direct benefits.

Pharmacists must assume the solution of the problem of providing the therapeutic agents and of placing these agents in the hands of the consumer, prepared, tested, standardized and commercialized.

HOUSE OF DELEGATES, AMERICAN PHARMACEUTICAL ASSOCIATION

MINUTES OF THE SESSIONS HELD IN CHICAGO, ILL., AUGUST 14, 15 AND 16, 1918.

FIRST SESSION.

The first session of the House of Delegates, A. Ph. A., was called to order by Chairman Samuel C. Henry in the Congress Hotel, Chicago, at 4.30 P.M., August 14, 1918.

Secretary Hostmann announced that credentials had been received for 86 delegates representing 32 State associations, and for 98 delegates representing non-voting organizations. In attendance were 31 delegates representing 19 State associations and 27 non-voting delegates.

The order of business was suspended, and the Chairman introduced Colonel Raymond, of the M. C., U. S. A., who spoke as follows:

MR. CHAIRMAN AND GENTLEMEN OF THE AMERICAN PHARMACEUTICAL ASSOCIATION:

I came to listen to your deliberations and learn something, rather than to talk and impart. This morning I had the privilege of listening to a paper read before the Section on Education and Legislation, which I thought might be of interest to me. The paper seemed to touch upon a very vital point, a matter of interest probably to you all, namely, the commissioning of pharmacists in the Army.

I am not commissioned by the Surgeon-General to come here and speak on this subject, and sometimes we have to be very careful as to what we say. We do not generally get hurt by saying too little, but sometimes we venture too far and say too much. If that subject will interest you, I will say just one word upon it.

I am not going to promise you much, I am going to tell you about a little hardihood I must have had in speaking upon this subject before the dental gentlemen. I spoke before the Ohio State Association about eight years ago, and at that time the Dental Corps of the Army was without commissions, and had been so for eight years. I want to tell you that at that time the question of commissions for dentists was in practically the same state as the question of commissions for pharmacists is in to-day.

I am not a pharmacologist, neither am I a dentist, and yet you may be surprised to know that I am now an honorary member of the Ohio State Dental Association, and I want to tell you in a few words how it happened. Maybe you can draw a lesson from it.

When the Dental Association met here last week I recalled to mind that I said a few words before the Ohio Association eight years ago, and I looked among my old papers and found a short printed abstract of my remarks of eight or ten years ago, and I put it in my pocket and I have it here now. I said to those gentlemen, something in this fashion:

"To secure a real, efficient dental corps, the appointees ought to grow up with the Army, not have a corps of fifty dental surgeons to-day, and the next day, or six months, or twelve months from to-day not have half of them, and new men coming in all the time to take their places; there is no permanency about it, but when you make it worth while you have got to come in and get a commission for life. The men should be commissioned officers.

"I do not mean to say that the man without shoulder straps is peculiarly outranked, yet it is pretty nearly so in the Army. The Army dentist of to-day is unclassifiable, if I may use that term, simply because he has no recognized rank. He is like a ship without a rudder. As matters are at present the dentist has no authority over his soldier patients. They very well said to him, if it suits me, at my pleasure, when he went among them to do his official duty. On the other hand, holding a commission, the men understand that you are sent by the President to do something, and when you speak it is, as it were, a message from the President calling for obedience. That is the difference.

"The corps must have authority vested in it. It must be permanent and it must be commissioned to be permanent, in order to fight for the principles for which it stands. It must be commissioned to be permanent, and it must be permanent to amount to anything."

Gentlemen, that is not promising you anything at all. It is simply saying what I said to those men eight years ago after they had been in the service eight years, and it amounts to about this, that before you gentlemen can get commissions in the Medical Department of the Army, you have got to show them in Washington that you are deserving thereof.

My father was always very much liked by the young people, and he went into a wholesale drug store one day, and he saw a lad there whom he knew, about so big (indicating) and he said, "Will, are you here," and Will said, "Yes, I just started with the firm." My father said to Will, "Make yourself indispensable," and ten or fifteen years after that time that young fellow told me what my father had said to him, "make yourself indispensable," and he said it impressed itself upon his mind, and at the age of thirty-five he was the President of one of the biggest book stores in the country.

I do not know that I can say anything to you better than my father said to that boy, "Make yourself indispensable." In other words, gentlemen, it does not lie with me, or with the authorities in Washington; it is up to you.

THE CHAIRMAN: Colonel Raymond, I can say for those assembled here that we thank you for your kind words, and we are indeed interested in your reference to the Dental Corps, and your previous visit to the Dental Organization, and there can be no doubt in the minds of anyone who studies the subject but that the Dental Corps has been an efficient force in the Army, the Surgeon-General only recently having expressed himself as highly gratified with the services rendered by that Corps. In view of your experience in having addressed the dentists some years before they secured recognition, and in view of the efforts on the part of the pharmacists of the country to secure recognition in the Army, let me say to you for the benefit of the individual pharmacists, and inasmuch as we all know that the pharmacists are actual requirements of the Army, I sincerely trust and look forward to the time when you may be an honorary member of this Association, after the Pharmaceutical Corps has been established. I may say to you that I am such an optimistic individual and so thoroughly American that I have not the slightest doubt in my own mind but that day is coming, and coming soon.

Chairman Henry then appointed the following as a *Committee on Resolutions:* Wm. C. Anderson, New York; W. H. Cousins, Texas; F. W. Meissner, Indiana; J. A. Koch, Pennsylvania; and F. H. Freericks, Ohio.

The Secretary read a communication from William R. White, of Nashville, Tenn., suggesting that the members forward copies of current issues of all pharmaceutical journals to pharmacists in the service. After a detailed discussion this suggestion, upon motion duly made and seconded, was adopted.

Vice-Chairman Otto F. Claus assumed the chair while Chairman Henry read the following:

ADDRESS OF THE CHAIRMAN OF THE HOUSE OF DELEGATES.

TO THE MEMBERS OF THE HOUSE OF DELEGATES:

Permit me, first of all, to express my appreciation of the confidence reposed in me and the honor conferred upon me by my election to the chairmanship of this body.

The irregularities of the action taken by the parent body relative to the changes made in the by-laws of this body and the transfer of certain important functions from the parent body to the House of Delegates having been called into question by one in authority, the matter has been taken up by a special committee and a report thereon will be presented to you at a later session. However, your Chairman is of the opinion that such action was in all respects regular and we shall proceed with the work before us with that thought in mind, unless you direct otherwise.

You will shortly have presented to you the report of the special committee on federated pharmacy and I bespeak for this report your earnest and serious consideration. It must be very apparent to all that the idea of federated pharmacy, that is, one grand organization that would have supervision over all matters pertaining to our honored calling, appeals to the mind and the heart of every true organization man. In considering this question, however, we cannot and

should not close our eyes to the actual conditions as they exist. For instance, we are all aware of the fact that the interests of the various branches of the drug industry are not always along parallel lines and when it so happens, as it frequently does, that the interests of the various branches do differ, it is but natural and proper that those interests directly affected should champion their own cause. True, it is proposed in the plan of federation, which has been under consideration, to have the various organizations now in existence continue and to permit them to continue their activities concerning those matters which directly affect their members. And right here the man who is in touch with current events rises and propounds the question: why federate? Your Chairman frankly confesses that he has not as yet heard a satisfactory answer and that in spite of the fact that he has honestly endeavored to do so, he has not succeeded in finding a satisfactory answer.

These thoughts are not uttered with the idea of influencing your action, but merely to cause you to carefully consider the action you take relative to the report of this special committee, and I might add that they are in line with the action of the committee and the conference of delegates from other organizations with your committee. It seems to me that the House of Delegates as at present constituted offers a very convenient channel through which the A. Ph. A. can give expression to the thoughts and desires of the various branches of the trade, and in the National Drug Trade Conference there has already been provided an agency for carrying such plans into effect. Let us all, therefore, do our utmost to make these two agencies of the greatest possible value and let us use them to the utmost in our efforts toward the uplifting of our honored profession.

VICE-CHAIRMAN CLAUS: You have heard the reading of the address of our Chairman. What is your pleasure?

Upon motion the address was accepted.

CHAIRMAN HENRY: We will now have the report of the Secretary.

Secretary Hostmann read as follows:

REPORT OF THE SECRETARY OF THE HOUSE OF DELEGATES.

There is nothing your Secretary can add to what he has said in his reports of the past three years, and he believes that repetition would be only tiresome and wasteful.

I again express the hope and wish that the status of the House of Delegates will be so fixed that the officers thereof may know just what they are to do. Due to the chaotic condition in which affairs were left last year your Secretary and Executive Committee have not been able to be very active. The details concerning the reasons therefor have been mentioned by the Chairman, and will be further brought out in the report of the Committee on the House of Delegates.

Your Secretary, having secured 250 reprints of the Minutes of the last session, mailed a copy thereof to each member of the last House as well as to the Secretary of each State association. In addition to the Minutes there was mailed to the State Secretaries a letter asking for active interest in the deliberations of the present House. This letter was accompanied by one from Chairman Arny of the Committee on the House of Delegates appointed by President Dohme, in which, in asking for coöperation, he announced that this important committee would report to this body.

In closing I will again express the hope that at the present sessions the questions of doubt now existing as to what is what will be answered so that the House may proceed to take its proper place in the organized effort to better conditions for American pharmacy and everything relating thereto.

THE CHAIRMAN: You have heard the report of the Secretary, which contains no recommendations. What is your pleasure?

MR. CLAUS: I move it be accepted. Carried.

THE CHAIRMAN: We will now listen to the report of the Committee on Federated Pharmacy.

Chairman H. V. Arny then read the report of the Committee on Federation.

REPORT OF THE COMMITTEE ON FEDERATION OF AMERICAN PHARMACEUTICAL ASSOCIATION:

In accordance with a recommendation made last year in the address of President Wulling and approved at a general session of the Association, President Dohme on January 22nd appointed

the following as members of a Committee on Federation: H. V. Arny, C. E. Caspari, C. H. LaWall, W. A. Hover, F. J. Wulling, J. H. Beal, J. U. Lloyd, S. C. Henry, A. R. L. Dohme and W. B. Day.

The Committee was immediately organized by correspondence and since then four bulletins have been issued in which the basic principles of the federation of American Pharmaceutical bodies were discussed. During the same time, largely through the energetic efforts of President Dohme, other national and State pharmaceutical organizations became interested in the plan of federation.

The discussion by correspondence showed that a satisfactory solution of the problems before us could be secured only by meeting of the Committee, alone and with representatives of other organizations likely to be included in the plan of federation.

Such meeting was held in Chicago on August tenth on the morning of which day eight of the ten members of the Committee met and informally discussed federation and passed a motion reaffirming the principles of federation enunciated in the address of President Wulling last year.

In the afternoon, a conference, at which the Committee met with the representatives of National Drug Bodies, brought the results outlined below. At this conference, H. V. Arny presided, while W. B. Day acted as secretary and on roll call the following delegates were found to be present:

From the National Association of Boards of Pharmacy: *H. C. Christensen.* From the American Conference of Pharmaceutical Faculties: *T. J. Bradley, R. A. Lyman and Edward Kremers.* From the American Drug Manufacturers' Association: *C. J. Lynn, R. C. Stofer and C. M. Woodruff.* From the Proprietary Association of America: *F. A. Blair, E. F. Kemp and Z. C. Patten.* From the National Association of Retail Druggists: *W. H. Cousins and S. C. Henry.* From the American Association of Pharmaceutical Chemists: *C. H. Searle and W. S. Burdick.* From the American Pharmaceutical Association (Federation Committee): *H. V. Arny, C. E. Caspari, C. H. LaWall, F. J. Wulling, J. H. Beal, J. U. Lloyd, A. R. L. Dohme, S. C. Henry and W. B. Day.*

In addition to the foregoing delegates, H. M. Whelpley, H. P. Hynson and M. A. Mandabach were present as guests and were given the privilege of the floor.

The National Wholesale Druggists' Association selected a delegation consisting of J. W. Morrisson, Francis Keeling, Jr., and Paul Schuh. none of whom were present at the conference.

After a general discussion of federation, the following resolution was submitted by C. J. Lynn:

> WHEREAS: The experience of the last fifty years and more have demonstrated that one national organization has not adequately cared for the varied interests of the several branches of American Pharmacy: which experience is the underlying reason for the organization of the several independent national associations now existing, which have heretofore most effectively represented their respective interests; and
>
> WHEREAS: Many of the delegates here present are without power to bind their respective organizations to any plan of federation; therefore be it
>
> *Resolved*, That it is the sense of this informal meeting that a mergence of such organizations in a larger federation at this time is not practical; and be it further
>
> *Resolved*, That having in the National Drug Trade Conference an organization which has already accomplished much good for the common interests of the several associations here represented, it should be the aim and purpose of these bodies to further develop the Conference so that it may be still more efficient in promoting the general welfare of scientific and commercial pharmacy, in which we are all concerned.

That resolution was put to a vote and was approved, Messrs. Wulling, Dohme, Caspari and Lyman asking to be recorded as voting against it.

There was then passed a motion that a conference of delegates from organizations invited to the 1918 meeting be held on the Saturday prior to the 1919 meeting of the American Pharmaceutical Association, and that a committee consisting of one representative from each National drug body be chosen as a Committee on arrangements for the 1919 conference. This motion carried and the Chair selected the following committee: J. W. Morrisson (N. W. D. A.), H. C.

Christensen (N. A. B. P.), T. J. Bradley (A. C. P. F.), C. J. Lynn (A. D. M. A.), F. A. Blair (P. A. A.), W. H. Cousins (N. A. R. D.), C. H. Searle (A. A. P. C.) and H. V. Arny (A. Ph. A.).

On Monday, August twelfth, your Federation Committee met again for a final discussion of the problems entrusted to it, notably those questions relating to the House of Delegates and the federation of State pharmaceutical associations, that is being accomplished through the work of the House.

At this meeting the following recommendations were adopted and are transmitted to the House and to the General Session of the association for final action:

1. *Resolved*, That it is the sense of the Committee that the by-laws of the House of Delegates should be so amended that all voting delegates to the House having the right to vote shall be members of the A. Ph. A. at the time they serve.

2. *Resolved*, That it is the sense of the committee that the continuation and strengthening of the House of Delegates and the active exercise of its functions present a great opportunity for the furtherance of the federation of pharmaceutical organizations for the better coördination of the efforts of such organizations in national and state affairs and for the proper development and evolution of pharmacy.

A third resolution (given hereafter) is based upon the fact that last year Chairman J. H. Beal of the House of Delegates proposed five additions to the functions of the House, as follows:

(A) Transfer the reception of fraternal delegates from other pharmaceutical and allied organizations or from departments of the United States Government from the General Sessions to the sessions of the House of Delegates.

(B) Abolish the Committee on Resolutions provided for in Articles I and IX, Chapter X of the by-laws and transfer its functions to a similar committee of the House of Delegates.

(C) Instruct the committees on the United States Pharmacopoeia and on the National Formulary to report to the House of Delegates.

(D) Make it the duty of the Committee on Patents and Trade-marks to report to the House of Delegates.

(E) Transfer the reports of the Commission on Proprietary Medicines (except upon financial matters and upon the election of members) from the Council to the House of Delegates.

The first of the above recommendations was adopted at the Third General Session of the Association last year; the second recommendation was referred to the committee on Constitution and By-laws, which has not yet reported thereon; the third, fourth and fifth recommendations were laid on the table.

Your Federation Committee gave this matter its careful attention and believing that all of the five recommendations are of vital importance to the development of the House of Delegates submits the following:

3. *Resolved*, That the recommendations made last year by Chairman Beal of the House should be adopted.

A final recommendation made by your committee is:

4. *Resolved*, That the Committee on Federation be continued for another year.

In conclusion, your Committee begs, in summarizing its work, to say that as in all great undertakings, the work accomplished by it during the past year is not as great as was desired by some of its members. It has, however, made one great step toward federation by starting a movement toward the enlargement of the scope of the Drug Trade Conference, by which it is hoped that a broad federation of national drug organizations will be secured. It will make another advance if the plan of federation of State associations in the House of Delegates is strengthened, by the adoption of the resolutions submitted above. These two basic purposes accomplished, the Conference and the House will be as two piers of a great bridge and when as years go on there is completed between the two a connecting span in the shape of service features so vitally needed by American pharmacy, the federation idea will then be a realized dream.

THE CHAIRMAN: What is your pleasure relative to this report?

H. P. HYNSON: I move that this report be adopted and its recommendations agreed upon.

THE CHAIRMAN: The Chair desires to do that which this body wants done. Inasmuch as this report contains recommendations and resolutions, which it is suggested should be adopted, this report should be referred to the Committee on Resolutions. It seems to me the proper course would be to have the report referred to the Committee on Resolutions, and then brought in and discussed at the next meeting of this body.

H. P. HYNSON: I wanted the opportunity to make a motion for the adoption of the report which I had so much at heart, and which seems to be a long step toward progress that we have been striving to accomplish for so many years.

H. M. WHELPLEY: I move that this report be received and referred to the Committee on Resolutions. Seconded.

(After some further discussion the latter motion was carried.)

THE CHAIRMAN: The Secretary has a proposition to change the by-laws of the House of Delegates, which he desires to submit at this time.

SECRETARY HOSTMANN: In these recommendations contained in the report of this Committee there is one which recommends that the membership in the House of Delegates be limited to delegates who are members of the American Pharmaceutical Association only, and if that is adopted it will mean an amendment to our by-laws, and in order to save time I am submitting it now, because amendments to the by-laws have to be submitted in writing and lay over. I, therefore, offer the following amendment:

> Amend Chapter II, Article I, Line 4 to read "provided, however, that such delegates so appointed must be members of the American Pharmaceutical Association at the time they serve."

THE CHAIRMAN: Let us understand just what the purpose is.

SECRETARY HOSTMANN: Delegates should be members of the American Pharmaceutical Association at *the time they serve* in the House of Delegates, because organizations—for instance, the Missouri Pharmaceutical Association—may appoint as a delegate a person not yet elected a member, but who would be elected between the time of being appointed as a delegate and when in attendance.

THE CHAIRMAN: I think you have made your point very clear and unless there is any objection it will lay over as provided for in the by-laws.

H. M. WHELPLEY: I move that the House of Delegates recommend to the Association that the dues of members serving in the Army and Navy be suspended during the period of the war, provided such members do not desire to receive the Year Book and the JOURNAL.

THE SECRETARY: I move this be referred to the Committee on Resolutions. Seconded.

H. M. WHELPLEY: We have members serving in the Army, also in the Navy, who desire to receive the Year Book and the JOURNAL, and expect to pay their dues. This is the reason the motion is worded in the particular manner that it is.

The motion was carried.

On motion of William C. Anderson the first session of the House of Delegates adjourned to meet Thursday afternoon at 4.30 o'clock.

SECOND SESSION.

The second session of the House of Delegates was called to order by Vice-Chairman Otto F. Claus, at 4.30 P.M., Thursday, August 15, 1918.

Secretary Hostmann read the minutes of the First Session in abstract form.

THE CHAIRMAN: You have heard the reading of the minutes of the First Session in abstract form. What is your pleasure?

H. V. ARNY: I note the resolutions presented were adopted and referred to the Committee on Resolutions, according to the minutes. That should be changed to read, "Received and referred to the Committee on Resolutions."

WILLIAM C. ANDERSON: I think that change ought to be made. I move that the minutes be approved, with the change noted. Carried.

The Chairman appointed the following Committee on Nominations: Wm. C. Anderson, J. A. Koch and J. G. Godding.

THE CHAIRMAN: We will next have the report of the Committee on Resolutions.

Chairman William C. Anderson, of the Committee on Resolutions, presented the following report for that Committee:

REPORT OF THE COMMITTEE ON RESOLUTIONS.

Mr. Chairman, the Committee considered the resolutions referred to them, and find that Resolution No. 1 provides for an amendment to the by-laws, and that was presented and a formal amendment to the by-law was prepared, and laid over under the rules. Consequently, that is with the House of Delegates, rather than in the hands of the Committee, and will come up in regular order, and we will take no action on it.

Resolution No. 2 is as follows:

> "*Resolved*, That it is the sense of the Committee that the continuation and the strengthening of the House of Delegates and the active exercise of its functions present a great opportunity for the furtherance of the federation of pharmaceutical organizations for the better coördination of the efforts of such organizations in national and state affairs and for the proper development and evolution of pharmacy."

We recommend the adoption of that resolution. I would suggest that these be acted upon seriatum,* in order to save time.

> "*Resolved*, That the Committee on Federation be continued for another year."

We recommend the adoption of the following:

> "*Resolved*, That we transfer the reception of fraternal delegates from other pharmaceutical bodies and other local organizations, or from the Departments of the United States Government, from the General Sessions to the Sessions of the House of Delegates."

We recommend the adoption of the following:

> "*Resolved*, That the Committee on Resolutions be abolished, as provided for in Articles I and IX, Chapter 10, of the by-laws of the American Pharmaceutical Association, and transfer its functions to the same Committee of the House of Delegates." In other words, have one Committee on Resolutions, instead of two.

We recommend the adoption of the following resolution:

> "*Resolved*, That we instruct the Committee on the United States Pharmacopoeia and on the National Formulary to report to the House of Delegates."[1]

That means that those Committees can report to other Sections, if need be, but there must also be a report to the House of Delegates.

We recommend the adoption of the following resolution:

> "*Resolved*, That it be made the duty of the Committee on Patents and Trade-marks to report to the House of Delegates."

That simply means that in addition to the other reports they are to submit one here as well.

We recommend the adoption of the following resolution:

> "*Resolved*, That the Report of the Commission on Proprietary Medicines, except upon financial matters, and election of members, be transferred from the Council to the House of Delegates."

We recommend the adoption of the following resolution:

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* This was done and each recommendation was separately discussed before adoption, and the minutes are abridged to the extent of not reporting each separate action.—EDITOR.

[1] This resolution was discussed at considerable length. It was brought out that by being presented here all State associations would have the benefit of the report by being presented in the House of Delegates, giving wide publicity, and also that such presentation here did not prevent the report going to the Sections as heretofore.—EDITOR.

"*Resolved*, That the House of Delegates recommends to the Association that the dues of members serving in the Army or Navy be suspended during the period of the war, provided that such members do not desire to receive the JOURNAL and the Year Book."

The discussions having been separately conducted and each resolution approved, S. L. Hilton moved the adoption of the report as a whole; the motion was seconded by President Dohme, and carried unanimously.

SECRETARY HOSTMANN: At yesterday's session I introduced an amendment to the by-laws, Chapter II, Article I, adding to Line 4 the words, "provided, however, that such delegates be members of the American Pharmaceutical Association at the time they serve." I move, Mr. Chairman, that we adopt that amendment to the by-laws. Seconded by S. L. Hilton.

After a spirited discussion by Messrs. Freericks, Hynson, Arny, LaWall, Koch, Hostmann, Dorsey, England, Whelpley and Anderson, the latter moved to amend so that the amendment read as follows:

Amend Chapter II, Article I, By-laws of the House of Delegates, by adding to line 4 the words, "provided, however, that the delegates so appointed will have the privilege of the floor, but no vote, unless they be members of the American Pharmaceutical Association."

The vote being called for the amended motion was carried.

SECRETARY HOSTMANN: I have a communication in which the Council recommends to the House of Delegates a discussion of the subject of combination dues of the American Pharmaceutical Association and the State association on the basis of 100% membership of the State association, the latter collecting the combined dues and remitting to the American Pharmaceutical Association its portion of the dues.

This communication was made the first order of business for the next session, and the second session of the House of Delegates was then adjourned.

THIRD SESSION.

The third session of the House of Delegates was called to order by Chairman Henry at 2.00 P.M., August 16th.

The minutes of the previous session were read in abstract by Secretary Hostmann.

THE CHAIRMAN: Unless there is some objection the minutes will take the usual course. According to the action taken yesterday, the first order of business is the communications from the Council, which we will now have.

SECRETARY HOSTMANN: The first one is the communication read yesterday, that the Council recommends to the House of Delegates a discussion of the subject of combination dues of the American Pharmaceutical Association and the State association on the basis of 100% membership of the State association, the latter collecting the combined dues and remitting to the American Pharmaceutical Association its portion of such dues.

THE CHAIRMAN: It appears to the Chair that the recommendation of Council is that we, the House of Delegates, discuss this proposition.

E. F. KELLY: The general proposition in the beginning was an attempt to bring the state associations into closer touch with this Association. This proposition was originally brought up by Dr. Hynson, with the idea of provoking discussion on the possibility of combining the dues, so that when a man paid association dues these carried membership in both the State and this Association. In just what form it should be done is immaterial to us, but the idea was for the House of Delegates to discuss this matter, and then have the members take it before their State associations at the next annual meeting.

I am frank to say that when it comes before the Maryland Association I will bring it up, but I doubt whether we will get very enthusiastic support, because my experience is that you have got to start out with a project of this kind and wait

for it to mature. I believe, if we could bring this thing about, it would be one of the greatest steps toward federation that we could take.

H. V. ARNY: In addition to what Mr. Kelly has said, I will possibly be a little more specific. The general idea was that this plan would be on the same basis as a clubbing rate. We pay the American Pharmaceutical Association $5.00 a year, and we pay our State association $2.00 a year, and the question arose, could we make the members of State associations a combined rate of $5.00. We want, first, the members of the State associations to go back to their respective State organizations next year and bring the question before them for general discussion. If they favor the joint rate idea, the apportionment will come later.

We could perhaps also apportion a smaller percentage of the State membership; in other words, 25%, 30% or 40%. I suggested an idea of making a special rate for subscriptions to the JOURNAL of the American Pharmaceutical Association, not the Year Book, on the basis of, say, something like 25%, so if they desire to affiliate to the extent of getting the JOURNAL, a special rate for that would be given. From that we crystallized into the thought of bringing it squarely before the Association to put it before the State associations with the proposition whether it would be worth $5.00 to belong to both.[2]

JACOB DINER: When a non-member is in a receptive mood to be talked to on the subject of Associations, it is just as easy to point out to him the wider interests which are opened up to him by membership in the American Pharmaceutical Association, and it is quite feasible, in fact, possible, to more readily interest a man in a membership which will carry with it membership in the State association and in the A. Ph. A. for only a small additional sum. When a man is brought into the mood to join, it is not so much a matter of how much it is going to cost as whether he should or should not affiliate, and when he decides to do so he would just as soon join both as one. It would materially aid the State associations, and at the same time the American Pharmaceutical Association.

C. B. JORDAN: I know what my State Association is going to say. Of course, the question is how much is to be paid by the different State associations. I would like to ask those of you who were at the Council meeting if you think we are in a position to say to that State Association, for the sake of discussion, that the fee will probably be $5.00, and that the American Pharmaceutical Association will accept $3.00, provided we get 100% membership? Can we also state to the members that they will become bona fide members of the Association, and will receive the JOURNAL and the Year Book?

I think this is one of the best propositions I have heard of in a long time. We can go back to the State associations and put it up in such a way, provided we can get sufficient copies of the JOURNAL and the Year Book to show them what they will receive, that we will get favorable action on it, but, as Dr. Kelly says, it will take a lot of work to crystallize the plan.

H. V. ARNY: We feel if the Association goes into it that it should be on the basis of 100%, but, of course, that does not imply that the plan is not workable if we do not get 100% of the State associations. It would be of great advantage to the members of the State associations if, as in the case of the New York State Pharmaceutical Association, members instead of paying $7.00 a year would have to pay only $5.00 a year.

WILLIAM C. ANDERSON: I move that the House of Delegates approve of this proposition, and request the delegates from each State association to bring this matter up before their respective State associations for active discussion at the next annual meeting.

JACOB DINER: I second that motion.

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[2] It was later developed that some State associations have annual dues of $5.00, which would make it necessary to fix some other basis. The subject is, however, for discussion and further action.

THE CHAIRMAN: That is all very clear now. I think you brought out the points the Council desired to be discussed, and if there is no further discussion I will call for the question. The motion was carried.

A communication from the President of the National One-Cent Letter Postage Association was read and referred to the incoming House of Delegates.

The report of the Nominating Committee was called for. It reads:

REPORT OF THE NOMINATING COMMITTEE.

Your Committee on Nominations respectfully recommends the election of the following: For Chairman, Otto F. Claus, of Missouri; for First Vice-Chairman, Samuel L. Hilton, of the District of Columbia; for Second Vice-Chairman, E. F. Kelly, of Maryland; for Recording Secretary, Jeannot Hostmann, of New Jersey.

(Signed) WM. C. ANDERSON,
J. A. KOCH,
J. G. GODDING.

On ballot they were declared elected.

The newly-elected officers were then duly installed and responded briefly, expressing their thanks for the recognition, and Chairman Otto F. Claus assumed the chair.

Samuel C. Henry thanked the members for having honored him with the office which he was now relinquishing, and for the assistance given him. He continued in part as follows:

I sincerely trust that the House of Delegates will realize, now that it has been properly constituted and organized, that the members have within their control a power and influence that can be wielded for the good of pharmacy.

I regret very much that during the past year it was not my privilege, to have the opportunity to do some of the things I desired to do for this organization. I think every one here realizes that it was not any lack of desire upon my part, but simply a physical impossibility for me to do those things. But I want to assure you in retiring from this office that whatever may be possible for me to do in the days that are to come, or if in any way I can help this House of Delegates, or the parent body, or anything connected with the A. Ph. A., I am ready and willing to do it to the limit of my ability. A federated Pharmacy you and I believe in and desire, and is a consummation to be hoped for. Some of us may see difficulties in the way of a complicated amalgamation of all pharmaceutical affairs put under one banner. But the essential thing has been to do that which will be most of all for the good of pharmacy. You have the House of Delegates, you have the Drug Trade Conference, and, while the Drug Trade Conference makes mistakes at times, being a human agency, it does good most times, it can be made a power for greater good, and let us use the instrumentality we have at our command, and I am very sure if it is used, and the House of Delegates uses it in a proper way, pharmacy will be advanced.

E. G. Eberle moved a vote of thanks to the retiring and re-elected officers. The motion was seconded by Jacob Diner and adopted by a rising vote.

The House of Delegates then adjourned sine die.

PROCEEDINGS OF THE LOCAL BRANCHES

"All papers presented to the Association and its branches shall become the property of the Association, with the understanding that they are not to be published in any other publication than those of the Association, except by consent of the Committee on Publication."—By-Laws, Chapter X, Art. III.

Reports of the meetings of the Local Branches should be mailed to the Editor on the day following the meeting, if possible. Minutes should be typewritten, with wide spaces between the lines. Care should be taken to give proper names correctly, and manuscript should be signed by the reporter.

Chairman Ivor Griffith, of the Committee on Local Branches A. Ph. A., has addressed a letter to the Branches which conveys a good suggestion that should be productive of results. It follows the lines of a recommendation made by Secretary J. W. England several years ago of submitting each month a paper prepared by some member of the Association to all the Branches for discussion. The first article of the contemplated series has also been sent out, and this is printed immediately following Chairman Griffith's communication to the Branches of the American Pharmaceutical Association which reads:

As Chairman of the Committee on Local Branches of the American Pharmaceutical Association, and anxious to afford the Committee a tangible reason for existence, I sincerely request your assistance to carry out a plan which the Committee believes will benefit each Local Branch as well as the Association itself.

The plan is to offer to the Branches, at each stated meeting, one or two four-minute papers written by men prominent in the profession and dealing with a timely and appropriate subject which can be utilized as the basis of a general discussion. This need not interfere with the regular program, and the papers may be publicly read by the Secretary or any branch member.

The first paper which accompanies this note is timely and comes from the pen of the present President of the Association, Dean Charles H. LaWall. The subject is one that is of particular interest to the druggist and, coming from the American Pharmaceutical Association, it will give the Association prestige and take away from it the slur that it never does anything constructive for the retail druggist.

The Committee anticipates that it will have your hearty coöperation in this matter, because it feels that it must and will have the encouragement of every one concerned in furthering the interests of our Association in every conceivable way.

Yours for Pharmacy,
(Signed) IVOR GRIFFITH.

SHORTER WORKING HOURS FOR PHARMACISTS.

BY CHARLES H. LAWALL.

In beginning this brief contribution to a very important subject I wish first to disclaim any intention to give advice to retail pharmacists or to try to solve a very practical problem by proving how desirable it is in theory. What I can, with propriety, do is to refresh the minds of some who hear or read this symposium with facts and recollections.

In the first place, it must be clearly recognized that what is easily possible in one kind of neighborhood may not be at all possible or practicable in another, even in the same city, and then there is the variation, too, in urban and suburban locations. Contrasting present practice, however, with that of twenty-five years ago, we can see that great progress has been made, and judging by modern tendencies, the next five or ten years will see changes now looked upon as the dreams of an idealist.

In most city stores in residential neighborhoods the doors of pharmacies are not opened until 8.00, 8.30 or even 9 A.M. In many of these same stores an afternoon during the week is "taken off" by all hands, and the store is open for business only upon certain hours on Sunday. This is in part made possible by the influence of pharmaceutical associations in bringing together as friends those who otherwise would be enemy rivals, suspicious of each other's every act. There are now large sections of some cities where all stores but one are closed in turn, by mutual

coöperation and agreement. That this practice will increase instead of decreasing, there is not the slightest doubt. Once having tasted the freedom of shorter hours, few go back and ask to have the shackles welded on again.

Another factor, but one that is not so much in the interests of the profession as the voluntary progress described above, is the compulsory shortening of hours which has already been accomplished in some States. This is brought about through the influence of trades unions. In West Virginia, for instance, I have been told that everything is unionized, and that even the drug clerks are not permitted to work more than eight hours a day, except upon the payment of an increased wage for overtime service. This, of course, naturally results in cutting down the hours, but it cannot be looked upon as a satisfactory or healthy method, nor one that will help pharmacists in their aim to obtain professional recognition.

In conclusion, let me say that just as true as is the saying "Old times never return," so true is it that in the near future a pharmacist who ventures to keep open longer than a reasonable time for his neighborhood, will be looked upon as an "old timer" who is unprogressive. The worst of it is and what retards the change even now is that he will not be aware of it. But it is true. Isn't it?

LUZERNE COUNTY.

The Luzerne County Branch, A. Ph. A., held the regular monthly meeting in the Hotel Sterling, Thursday evening, February 13. Thirty-two members were present and after the serving of luncheon the following business was transacted:

Mr. Greenstein, chairman of the Commercial Relations Committee, reported his investigation of the effect the new tax law will have on the business of the pharmacist. Information along this line, he reports, is not very definite and will not be until the bill is signed.

Mr. Lynn, chairman of the Membership Committee, presented fourteen applications for membership.

A resolution was adopted in which the members agreed not to purchase any more patent preparations for the treatment of venereal diseases and to coöperate with the Public Health Bureau in discouraging their sale.

The next meeting will be held the second Thursday in March.

J. D. MORGAN, *Secretary.*

NEW YORK.

The February, 1919, meeting of the New York Branch of the American Pharmaceutical Association was called to order by President Lehman in the Lecture Hall of the New York College of Pharmacy Bldg. on Monday evening, the 24th, at 8.15 o'clock.

Thirty members were present.

The Treasurer's report was received and showed a balance of $64.00 on hand.

Auditing Committee: Dr. Diner reported that he passed all the bills he had on hand.

Membership Committee: No new members were reported.

Fraternal Relations: Dr. Lascoff brought in a report that the Booklet on useful Formulas be sent to each member.

Education and Legislation: Mr. Kennedy brought in a lengthy report which after some discussion was ordered accepted.

Dr. Dana S. Hubbard, Acting Director, Bureau of Public Health Education, now delivered his talk on the work of his bureau. Considerable discussion followed and a vote of thanks was tendered the speaker.

Under regular procedure the meeting was declared adjourned.

HUGO H. SCHAEFER, *Secretary.*

PHILADELPHIA.

The February meeting of the Philadelphia Branch of the American Pharmaceutical Association was held Tuesday evening, February 25th in the quarters of the Philadelphia Clinical Association, with the President W. W. McNeary occupying the chair. Reading of the minutes of the previous meeting and other business matters dispensed with, the Secretary read a communication from the Chairman of the Committee on Local Branches of the Association, explaining a plan which is being put into effect whereby prominent members of the Association furnish monthly a four-minute paper which is read at every local section in the Country. The first paper which was read by the Secretary was one written by Prof. Charles H. LaWall, the incumbent President of the A. Ph. A., dealing with "Shorter Hours for Pharmacists." The presentation was interestingly discussed by Messrs. Cliffe, Peacock, and Hendrickson. The scientific program of the evening was then opened by Dr. W. A. Pearson, dean of the Hahnemann College, who delivered a highly interesting lecture on the "Wonders of Physiological Chemistry." It is rarely that

such a highly scientific study is presented in such a thoroughly interesting manner, as was done by Doctor Pearson. He primarily analyzed the chemical constitution of the human being, pointing out the simple as well as the more complicated constituents of flesh and bone. His explanation and classification of protein compounds, his story of the analysis and synthesis of the amido-acid compounds by the Germans Fischer and Abderhalden, his introductory remarks concerning the cycle of changes through which proteins injested into the human economy must necessarily undergo in order to be fitted into their place in the human structure, were agreeably received by the audience.

Speaking particularly of some of the phenomena of physiological chemistry, which were as yet only vaguely understood, Doctor Pearson treated consecutively the following subjects:

(1) Enzyme action in the gastric and intestinal juices, explaining that pepsin and other proteolytic ferments existed in these digestive fluids in an inactive condition to be released for use in direct proportion to the amount of food to be digested. This happy balance was in some mysterious way calculated to a nicety by nature's own mathematical methods. In other words, the enzymes secreted were in direct proportion to both the amount and character of the food to be acted upon.

(2) *Thermoregulation of the Body.*—The lecturer pointed out the similarity that exists in degree of body temperature in the case of the Eskimo at the Pole or the Peruvian at the Equator. He also explained why the temperature of the body is raised when certain fevers or diseases oppress it. This elevation is partially the cause and partially the effect of the chemical reduction of the foreign bacterial proteins produced in the body fluids by the invading bacteria. Normally the happy balancing of forces in the body regulates and maintains the normal body temperature. Disease upsets this balance. Doctor Pearson also referred to the wonderful chemical and physical processes which are daily occurring in our livers and kidneys with the elimination of useless products and the retention and absorption of the necessary principles.

The paper was discussed by Prof. C. H. LaWall and F. E. Stroup.

Dr. George Koch, Agricultural Chemist to the Nulford Company, then presented a valuable paper on the "Cultivation of Medicinal Plants in the United States." This year was the critical year in this industry, the speaker explained, because it will tell whether this new American venture which has apparently been placed on a thoroughly scientific basis can survive foreign competition. He very clearly and thoroughly went into the story of the development of this new branch of American horticultural science and pointed out the fact that in this as in many other sciences, the ingenious Yankee quickly overcame all difficulties and placed the proposition on a paying schedule. The various methods of growing and general peculiarities of the following medicinal plants were discussed in detail: Belladonna, digitalis, hyoscyamus, stramonium and cannabis. Doctor Koch's paper will be published in full in the JOURNAL and consequently it will be unnecessary to abstract it more fully. The paper was discussed by Messrs. Glass, Stroup and Hessler. The Chairman appointed the following committee on Nominations to present their report at the next meeting: Prof. C. H. LaWall, E. G. Eberle and Raymond Hendrickson. The meeting was attended by over 40 persons.

COUNCIL BUSINESS

A. PH. A. COUNCIL LETTER NO. 11.

PHILADELPHIA, PA., January 31, 1919.

TO THE MEMBERS OF THE COUNCIL:

Motions No. 14 (Election of A. G. DuMez as Secretary of Scientific Section), No. 15 (Additional Appropriation of $300 to Item No. 4, Miscellaneous, of Budget of Appropriations and No. 16 (Vote of Thanks to Prof. John Uri Lloyd for Services) have each received a majority of affirmative votes.

President C. H. LaWall writes:

"The information contained in Dr. Day's communication relating to the storage of the archives and stock of the A. Ph. A. brings us to a realization of two things: First, the extent of our indebtedness to Prof. Lloyd for so generously accepting such a complicated and tremendous responsibility and fulfilling his obligations thereto in such a satisfactory manner and without remuneration. Second, the dire need of the Association for a home,

where centralized authority, properly equipped, can handle such things as a matter of routine. This is another argument for the much needed increase in membership."

In December, 1917, the Secretary of the Council received a request from the U. S. Chamber of Commerce asking that the American Pharmaceutical Association name a War Service Committee to meet in conference with the U. S. Chamber of Commerce War Committees in Washington, D. C.

The request was sent immediately to President A. R. L. Dohme and as a matter of record the following communication of January 22, 1919, is here given:

"In the matter of the War Service Committee, concerning which you wrote Mr. S. L. Hilton under date of January 4, 1919, I am pleased to inform you that when I received your request to have such a committee named, I only had a day or so in which to act before the Conference of the United States Chamber of Commerce War Committees held their meeting at Washington. I, therefore, named Mr. Hilton as Chairman, because he lived at Washington, with authority to name his associates. He named as such associates Messrs. J. H. Beal and A. R. L. Dohme, and the very next day we met at Washington and registered at the Chamber of Commerce Conference, held there in December, 1917.

This Committee became known, and is known, as the A. Ph. A. War Service Committee of the U. S. Chamber of Commerce. It has been acting ever since that time in connection with that Association. In fact, Mr. Hilton only recently attended the Atlantic City Conference of the U. S. Chamber of Commerce as such War Service Committee Chairman. I expected to be able to attend the Atlantic City Conference, but was unable to secure accommodations at Atlantic City, and hence could not attend. He, however, named an alternate in my place.

I trust this will straighten up the matter of the War Service Committee of the A. Ph. A. as far as your records go."

The Secretary of the Council has received the following communication of January 26, 1919, from S. L. Hilton, Chairman of the War Service Committee of the American Pharmaceutical Association:

"I think you are quite right, there should be some statement as to the work of the War Service Committee, and I am pleased to make a report:

"In December, 1917, and while Dr. A. R. L. Dohme was the acting President of the Association, I received from him a notice that he had appointed me chairman of a committee to be known as the War Service Committee of the A. Ph. A. and directing me to attend the meeting of War Service Committees of the Chamber of Commerce of the U. S. A. to be held the following day at the New Willard Hotel, Washington, D. C. He further directed that I was to select my associates. This was the first knowledge I had of a meeting to be held here and naturally I made some inquiries with the result that I 'phoned Dr. Dohme later in the day that I had received his letter, that I would be pleased to act and that I had selected Dr. J. H. Beal and himself (Dr. A. R. L. Dohme) as my associates, and while I could not get in touch with Dr. Beal in time for the meeting I would notify him, and I urgently requested Dr. A. R. L. Dohme to be present and attend the meeting for the reason that important matters would be considered and I thought the President of the Association should be present. We attended the meeting, found delegates from all branches of the drug trade and had a very important conference with them looking to the combined action of a united drug trade; this, however, was not entirely carried out as some interests felt that they should work alone.

"Following this initial meeting there were a number of conferences and our association was always represented, further there were weekly meetings of members of the War Service Committee members located in Washington to discuss matters of importance that were constantly coming up with the Government, the manner of procedure to avoid loss of valuable time when coming to Washington to get in touch with the proper officers of the government service, especially in regard to contracts, furnishing supplies, etc.; of course, we did not figure much in this, but we had the advantage of working together as a unit and bringing about that coördination that was so much desired.

"Then very frequently various departments would want to get in touch with some particular branch of an industry and this was accomplished through the chairman of the War Service Committee of that industry. On many occasions I was called upon to fur-

nish information with reference to professional pharmacy and I am happy to say that I was able to give the information, and on many occasions promptly, even now with the men returning I have received calls from the departments asking whether these men can be taken care of and positions secured for them in our branch, all of which I have advised fully.

Dr. J. H. Beal, Mr. E. G. Eberle and myself attended the Congress of War Service Committees at Atlantic City, held under the auspices of the Chamber of Commerce of the U. S. A., which I am sure all agree was worth while. Mr. Eberle I selected as an alternate, as Dr. Dohme was unable to attend.

"This Congress was called for the purpose of carefully considering the ways and means of bringing about a safe and sane readjustment of conditions to somewhere near pre-war conditions, so as to avoid as much as possible trade and labor difficulties, sudden and rapid declines or depreciation which possibly might bring on a panic and devise ways and means whereby capital and labor could come closer together on a common ground to avoid future trouble and loss of money. The result was most encouraging and I am confident will work out to the satisfaction of every interest. Another important point that was worked out was the question of the cancellation of contracts by the government and the methods of adjustment of same, then to what would be the result if the government should release at one time the enormous supplies of material on hand for which they had no further use. If this was done the market on the majority of commodities would go to pieces, much good has been accomplished and the industries in every particular line will be given an opportunity to take over such material thus holding market condition and avoiding serious losses.

"Since this Congress at Atlantic city, there has been held a meeting of the chairmen of the War Service Committees at the Waldorf Astoria, New York, for the purpose of taking care of a number of questions that were not settled at Atlantic City owing to the lack of time. This meeting in New York I had the pleasure of attending and I looked after the interests of the A. Ph. A.

"This about covers all of my activities as Chairman of this Committee. Yet there is possibly more work to be performed and I will give same my best attention until my successor is appointed."

J. W. ENGLAND, *Secretary*.
415 North 33rd St.

A. PH. A. COUNCIL LETTER NO. 12.

PHILADELPHIA, PA., February 17, 1919.

TO THE MEMBERS OF THE COUNCIL:

The following communication has been received from William B. Day, Chairman of the Committee on Invested & Trust Funds:

"TO THE COUNCIL OF THE A. PH. A.:

REPORT OF THE COMMITTEE ON INVESTED AND TRUST FUNDS.

Rule 16 of the General Rules of Finance (see page XLVIII of Year Book, Vol. 5) imposes upon our committee the duty of annually recommending to the Council the banks and safety deposit vaults in which the funds and securities, respectively, of the association shall be kept for the ensuing year.

"It therefore becomes our duty to report to the Council with such a recommendation for the fiscal year 1919.

"Treasurer Whelpley informs me that at the present time the principal bulk of the funds and the current account are kept in the International Bank of St. Louis. Some funds are in the Boston Penny Savings Bank, though most of the money, formerly kept there, has been invested in Liberty Bonds. The Treasurer rents for the A. Ph. A. a box in the Title Guaranty Trust Company vaults of St. Louis where the securities of the Association are kept. All of the bonds held by the Association are registered and therefore, cannot be sold without authorization of the Council.

"As Chairman of the Committee on Invested and Trust Funds, I have made inquiry through one of the leading banks of Chicago, concerning the security of these several institutions above named. I have the following information from my bank in reply to this letter of inquiry:

" 'The International Bank, St. Louis, Mo., have been valued correspondents of ours for a great many years and we regard them highly. In our opinion they are in a strong position, their statement of March, 1918, the latest in our possession, showing a capital of $500,000 with surplus and profits of $559,000. They favor us with an excellent account and we believe they are entitled to your entire confidence.'

" 'It is our understanding that the Boston Penny Savings Bank was established more than fifty years ago and it is considered a safe and conservative institution. Their officers appear to be highly regarded and the bank has been recommended to us as being worthy of full confidence. They are said to have a surplus of over $600,000 and deposits of about $13,000,000.'

" 'We understand the Title Guaranty Trust Company do not transact a general banking business, but confine their operations to the examination of titles and abstracts and the making of real estate loans. We have been informed that they control the American Trust Company, of St. Louis, which institution does a regular banking business and has deposits in the neighborhood of $7,000,000. The management of each institution appears to be in excellent standing.'

"In view of this opinion, it is the judgment of our committee that it will probably be best not to disturb the places where the funds and securities are being kept and we make this our recommendation."

The following report has been received from General Secretary Day:

"To the Council of the A. Ph. A.:

APPROXIMATE INVENTORY OF ASSOCIATION PROPERTY.

"An approximate inventory of the Association property recently shipped from Cincinnati has now been completed. I append a brief summary of it.

Proceedings.

1851–1911 (except 1860 when none was issued). One complete set.
Otherwise none for the years 1851, 1854, 1856 and 1859.
Total all other issues in cloth binding..... 2800 copies
Total all other issues in paper binding..... 2300 copies
Total all other issues unbound.. 2400 copies

Year Books.

No. 1 (1912) cloth bound..... 200 copies
2 (1913)..... 350 copies
3 (1914)..... 400 copies
4 (1915)..... 270 copies
5 (1916)..... 300 copies

Fifty-Year Index.

1852–1902, cloth..... 80 copies
unbound..... 100 copies

National Formulary III.

Cloth, plain..... 148 copies
Leather, plain..... 9 copies
Cloth, interleaved..... 36 copies
Leather, interleaved..... 28 copies

Bulletin and Journal.

Bulletin, Vols. 1 to 6 (1906–1911), 2 full sets bound.
Journal, Vol. 1 (1912) complete with index, 17 copies bound in cloth.
Unbound numbers of the Bulletin (1906–11) and Journal (1912–14) as follows:
Reserved in files:

	Bulletin.						Journal.		
	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.
Jan.	30	11*	10*	15	5*	29	37	28	25
Feb.	22	13*	30	15	..	26	40	25	32
Mar.	15*	22	5*	11*	22	26	21*	25	25
Apr.	27	12*	17	6*	27	23	32	30	28
May	18	15*	20	14	25	25	33	35	8*
June	13*	5*	18	14	28	29	32	30	6*
July	20	15*	19	15	31	31	32	36	4*
Aug.	14*	12*	17	15	31	30	40	35	2*
Sept.	10*	19	5*	3*	15*	19	30	30	None
Oct.	12*	22	8*	1*	31	22	34	28	1*
Nov.	15*	14*	15*	5*	24	22	30	26	None
Dec.	3*	16*	7*	15	28	27	32	32	4*

* Indicates entire stock of this issue.

"In addition to these, there are about six boxes of duplicates of the Bulletin and Journal none of which, however, are of the issues marked with an asterisk in the above classification and, therefore, of no value for the completing of sets.

"*Other Property*, not inventoried:
1 box containing electros used in Year Books.
4 boxes of exchanges, chiefly unbound drug journals.
9 boxes historical material.

DISPOSAL OF THE PROPERTY.

"Attention was called in my last communication (Council Letter No. 10) to the fact that rental for a store room in Cincinnati cost us $25.00 a month. Considering the bulk of the property (160 boxes aggregating over twenty tons in weight) I do not think we could store it in Chicago for less than that amount. If it were reduced to a third of its present bulk I could undertake to store it indefinitely and without expense here at the School. Upon going over the cash book I find the sales of Proceedings and Year

Books for the past four and a half years (Sept. 1, 1914 to Feb. 1, 1919), total $320.35. Fully half of this amount has been for current issues of the Year Book. Evidently we could reduce our stock greatly and still retain sufficient to supply all demands for many years to come. Certainly the storage charges would soon consume the value of the property. I, therefore, make the following recommendations for the disposal of the property and ask the approval of the Council:

1. *Retain* 50 copies of *each issue* of the Proceedings up to and including 1910 (so far as this number is available).
2. Retain 100 copies of the 1911 Proceedings (practically a year book) and of *each issue* of the Year Book.
3. Retain the 80 bound copies of the 50-year Index.
4. Retain all stock of the N. F. III.
5. Retain all *bound* volumes of the Bulletin and Journal.
6. Retain the unbound copies of the Bulletin and Journal listed in the above *tabulation*.
7. Retain all historical matter pending further report.
8. Retain all *bound* volumes among the *exchanges*.
9. Dispose of the remainder for its value as paper.

"I estimate that if these recommendations are put in effect we can reduce the bulk of the stored property by more than a half.

"I suggest also that we advertise sets of the five Year Books (1912–1916 inclusive) at a reduced price of $10.00 for the set."

J. W. ENGLAND, *Secretary.*

415 N. 33rd St.

COMMITTEE REPORTS

AMERICAN PHARMACEUTICAL ASSOCIATION FINANCES.

(Addenda to the Treasurer's Report, by H. M. Whelpley, August 1, 1918.*)

It is now ten years since I assumed the responsibilities of acting as your treasurer. The decade has been an important one in the history of the Association. The membership has almost doubled. The assets and trust funds are about twice the sum represented ten years ago. The Bulletin has become the JOURNAL OF THE A. PH. A., with all that signifies. The Year Book is now even more useful to the calling of pharmacy than ever before. The National Formulary of to-day is a large and important government standard. In a word, the A. Ph. A. has gradually but constantly developed its resources and extended its influence with the passing of time.

To-day we meet for the second convention since the United States entered the World War. We find pharmacy, like every other calling, vitally concerned in the most supreme period in the history of our country. The A. Ph. A. is in fair financial condition to meet the stress of the hour, and our membership ready for individual as well as collective action.

A. Ph. A. Members in the Service.—The association is well represented in the Government war service. Many members enlisted early in the conflict, and more are in the draft. Some were in the service when the war broke out. We have members who are so situated that they desire to pay their annual dues and continue to receive the Journal and Year Book. Others are "over there," somewhere in France, Italy, Russia or other section of the world. I have a list of about fifty members who entered the service but cannot be reached regularly by mail. Many of these will return to civil life and pharmaceutical pursuits after the war. They should again be active in the A. Ph. A. I recommend that the names of all such members be published in the Year Book. Also that those who after the war pay dues for the first fiscal year following the one in which the war closes be recorded as having continuous membership from the date of joining before or during the war. That the printed roll of members indicate the number of years of war service for which dues are remitted. Furthermore, that such years of war service, during which no dues are paid, shall not be counted in determining the date such a member may become a life member by paying a stated lump sum, or by paying for thirty-seven consecutive years, as stated in the By-laws. (This recommendation was adopted.)

The Collection of Dues is the first duty of the treasurer, his second obligation being to take good care of the funds. Ten years ago, the Association permitted delinquents to remain in our

* Submitted at the 1918 meeting. The treasurer's report for 1917 was published in the JOURNAL OF THE A. PH. A., Vol. VII. No. 5, May, 1918.

ranks for three years. Some were carried for even five or more years. To-day, delinquents may be suspended for the non-payment of dues on or after July 1st of the first fiscal year for which they owe. We carry no one beyond one year. To-day, all are paid up to January 1, 1918 and only 381 are delinquent for the past seven months. This number, no doubt, includes many who are in the war service. Owing to war conditions, I have not been quite as insistent, early in 1918, as I was one year previous. I have many letters from delinquents and the sentiment of the following is a fair sample:

"Here is my five dollars and I am off for 'Somewhere in France.' Good luck to the A. Ph. A.! If we soldiers are as watchful as the treasurer, the Kaiser will not be ableto escape us."

Auditing the Treasurer's Accounts.—At the 1917 meeting, the Council of the A. Ph. A. instructed the Committee on Finance to employ a registered auditing firm to examine and report on the records and funds of the treasurer. The report of the auditor was published in the JOURNAL OF THE A. PH. A. for May, 1918. The auditor approved of the methods of book-keeping, accounting and reporting on the financial condition of the Association. After examining the books and records, the auditor considered it unnecessary to recommend any changes whatsoever.

A. Ph. A. Membership.—The exigencies of war times have brought unusual fatalities to our membership and rendered the securing of new members difficult. In order to meet the new conditions, the officers and committees have given constant attention to the work of retaining those already members and securing new ones. As a result, we find to-day practically the same roll as we had August 15, 1917, when a total of 2,640 was reported. We have, however, an unknown quantity in the nearly four hundred who have not paid for 1918. Many of them are now or will soon enter the service. This cuts down our prospective assets compared with the amount realized on the 381 who, one year ago, owed for 1917. That figure was one thousand dollars.

The National Formulary receipts were very large last year, owing to the recent publication of the N. F. IV. I reported $1390.67 from January 1 to August 15, 1917. We received only $4059.24 from January 1 to August 1, 1918.

Current Funds.—This account consists of $16,865.28 in bank and $10,000.00 in St. Louis 4% bonds known as the General Fund. The total is $26,865.28 compared with $16,806.81 on August 15, 1917. The difference is not a profit, but due to the $10,973.06 paid into the current account by the National Formulary account after the 1917 meeting. In fact, we have lost $914.59 since August 15, 1918, and we may look for further decrease in revenue from dues and perhaps also from the National Formulary.

Permanent Funds.—These steadily grow apace with time by the accruing of interest. We now have a total of $39,020.93 or $1597.15 more than one year ago.

The Trust Funds have in twelve months increased $286.48 and now amount to $8949.93.

Special Fund.—Under this heading, we carry the A. Ph. A. Research Fund of $11,202.55.

Total Funds.—On August 1, 1918, your treasurer was responsible to the Association for a total of $86,038.69.

SUMNARY OF RECEIPTS FROM JANUARY 1 TO AUGUST 1, 1918.

Cash on hand, January 1, 1918			$ 6,282.86
National Formulary IV			4,059.24
Annual dues and Journal for 1916	$ 10.00		
Annual dues and Journal for 1917	240.00		
Annual dues and Journal for 1918	6,704.75		
Annual dues and Journal for 1919	555.00		
		$ 7,509.75	
Dues only of the A. Ph. A. for 1917 and 1918		28.00	
2 Parchment Certificates of Membership @ $5.00	10.00		
3 Paper Certificates of Membership @ $3.00	9.00		
		19.00	
National Formulary IV		2,001.75	
Journal Advertising	2,725.97		
Journal Subscriptions	146.82		
Journal, Miscellaneous	163.61		
		3,036.40	

Carried forward		3,036.40	
Proceedings and Year Book		51.60	
Index		0.50	
Gold Buttons	6.00		
Gold Pin	2.00		
Plated Pin	0.25		
Plated Button	0.25		
		8.50	
Bank Exchange		1.99	
Interest on St. Louis City Bonds	400.00		
Interest on deposit in International Bank	328.15		
		728.15	
(FUNDS.)			
American Pharmaceutical Association Research Fund for Liberty Bonds purchased 1917	5,000.00		
American Pharmaceutical Association Research Fund Interest on Liberty Bonds	100.00		
		5,100.00	
Procter Monument Fund for Liberty Bonds Purchased 1917	3,000.00		
Procter Monument Fund Interest on Liberty Bonds	60.00		
		3,060.00	
Ebert Legacy Fund for Liberty Bonds purchased in 1917	2,000.00		
Ebert Legacy Fund Interest on Liberty Bonds	40.00		
Ebert Legacy Fund Interest on St. Louis City 4's	40.00		
		2,080.00	
College Prize Fund, Interest on		0.85	
Life Membership Fund	597.80		
Life Membership Fund, Fee	75.00		
		672.80	
Centennial Fund, Interest on		73.87	
Ebert Prize Fund, Interest on		24.08	
Endowment Fund, Interest on		145.86	24,543.10
			$34,885.20

SUMMARY OF DISBURSEMENTS FROM JANUARY 1 TO AUGUST 1, 1918.

Salaries		$ 4,691.65
A. Ph. A. Journal		3,745.43
Printing, Postage and Stationery		495.44
Clerical		248.00
National Formulary		211.50
Miscellaneous Expenses		163.10
Membership Committee		52.80
National Drug Trade Conference		184.37
Year Book, No. V		2,949.88
Women's Section		7.80
A. Ph. A. Revision and Research Fund	$4,059.24	
A. Ph. A. Revision and Research Fund	100.00	
		4,159.24
Traveling Expenses		39.50
Section on Education and Legislation		8.75
Certificates		5.00
(FUNDS.)		
Ebert Legacy Fund		80.00
Procter Monument Fund		60.00
Ebert Prize Fund		24.08

College Prize Fund	0.85
Life Membership Fund	672.80
Centennial Fund	73.87
Endowment Fund	145.86
Total	$18,019.92

SUMMARY OF ASSETS AUGUST 1, 1918.

(PERMANENT FUNDS.)		
Life Membership Fund	$23,317.40	
Centennial Fund	3,131.55	
Ebert Prize Fund	1,157.35	
Endowment Fund	7,010.16	
Ebert Legacy Fund	4,404.47	
Total Permanent Funds		$39,020.93
(SPECIAL FUND.)		
American Pharmaceutical Association Research Fund, Total		11,202.55
(FUNDS HELD IN TRUST.)		
Rice Memorial Fund	178.40	
College Prize Fund	40.86	
Procter Monument Fund	8,730.67	
Total Funds Held in Trust		8,949.93
(CURRENT FUNDS.)		
Cash on Hand	$16,865.28	
Bonds which belong to Current Funds	10,000.00	26,865.28
Total		$86,038.69

RE-ESTABLISHMENT OF SOLDIER AND SAILOR PHARMACISTS.

The Advisory Committee of the A. Ph. A. for Soldier and Sailor Pharmacists perfected many of its plans at a meeting in Cincinnati, during the last days of December. Chairman H. C. Christensen of the Sub-committee on Reciprocal Registration is meeting with hearty co-operation from the several State Boards of Pharmacy, and it appears now that arrangements will be completed within the next month with nearly all of them for Reciprocal Registration to the advantage of Pharmacists and Assistant Pharmacists who are in the service, and who may find it necessary to locate in some other State. Some of the State Boards of Pharmacy do not have an early meeting, and action by them will need to be deferred, but the Committee confidently looks for coöperation on the part of every State Board. Chairman Edward Spease, of the Sub-committee on Education, has submitted to the colleges of pharmacy, the feasibility of arranging for a Special One-Year Course for Registered Pharmacists who may not have had the advantage of a pharmacy college education, and it is hoped that in some manner a plan may be devised by the colleges which will offer special opportunity for the returning men.

In its endeavor to reach pharmacists, drug clerks and chemists, who are now in the service, the Committee has secured assistance of the K. of C. and of the Y. M. C. A. War Service Bureaus. The K. of C. has arranged to post bulletins in all of the huts and Army buildings, and through Mr. Clarence O. Bigelow arrangements have been made with the Y. M. C. A. for the posting of large placards, announcing the work of the Committee in all of the Y. M. C. A. huts and buildings overseas. Through the United States Employment Service, in charge of Chief I. W. Litchfield, posters and announcements of the work of the Committee are also being made in every one of the Army camps within the country. In the Navy through the assistance of the Bureau of Medicine and Surgery, proper announcement has been arranged for in the Hospital Corps Supplement. The Committee is seeking still further means of reaching every soldier and sailor pharmacist, drug clerk and chemist, wherever he may be, and will appreciate every assistance that can be rendered in that respect. It is suggested, that those who are in correspondence with men in the service mention the work of the Committee, and ask that they communicate with it, and also urge other pharmacists in the service with whom they may come in touch to do so.

The Committee has decided to ask local coöperation in all cities throughout the country having a population of more than fifty thousand, and in all such cities a local committee will be appointed to have the work in charge. Many inquiries for positions have already come to the Committee from men who are now being discharged from the service, and in every case the Committee has been fortunate in being able to offer quite a list of openings. It is becoming even more evident, however, that the problems of the Committee will be great when the last half of the men return from the service, and it must be in possession of information from every drug store in the country in order to provide for systematic distribution in keeping with the needs of each section. Funds will be badly needed, though some contributions have been made by a few manufacturing houses. The Committee in order to properly carry on its work requires a number of employees to take care of correspondence and the compilation of data. Everyone should take to heart that the scope of the Committee's work and its success in the first place depend upon sufficient financial support. All contributing checks should be made payable to H. M. Whelpley, Treasurer, and mailed to the A. Ph. A. Advisory Committee for Soldier and Sailor Pharmacists at No. 1005 Mercantile Library Bldg., Cincinnati, Ohio.

(Signed) FRANK H. FREERICKS, *Chairman.*

THE 10TH MEETING OF THE CHICAGO BRANCH OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

The one hundredth meeting of the Chicago Branch, A. Ph. A., was held February 21, at La Salle Hotel, preceded by a dinner. The subject of the evening was "Pharmaceutical Research." The two papers on the subject were by Wilbur L. Scoville of Detroit and Dr. George D. Beal of Urbana. These were freely discussed, and will be printed in the April number of the JOURNAL OF THE A. PH. A., at which time also a report of the meeting will be included under "Local Branches."

The Branch whole-heartedly resolved that pharmaceutical research should receive more active support from pharmacists. The meeting was a most successful one and besides a good attendance, letters from pharmacists of various sections were read, expressing their regrets on account of not being able to attend the centenary meeting.

THE VICTORY MEETING OF THE AMERICAN CHEMICAL SOCIETY.

Secretary George D. Beal, of the Division of Pharmaceutical Chemistry, has sent out the following announcement: "The Victory Meeting of the American Chemical Society will be held in Buffalo, New York, April 8th to 11th. The topic before the Division of Pharmaceutical Chemistry at that time will be "The Possibilities of Drug Research." We wish to hold a symposium on this very timely topic, which has been brought to the fore by Professor Herty in his editorials in the *Journal of Industrial and Engineering Chemistry*, and invite your coöperation. We will also have our usual program of papers on topics of general interest. The titles of papers should be in my hands by March 21st, or in Secretary Parson's hands by March 24th."

The address of Dr. George D. Beal is 203 Chemistry Building, Urbana, Ill.

Sincerely yours,

G. D. BEAL, *Secretary Division of Pharmaceutical Chemistry.*

EDITORIAL NOTES

Editor: E. G. EBERLE, Bourse Building, Philadelphia, Pa.

Committee on Publication: J. W. ENGLAND, *Chairman;* G. M. BERINGER, CASWELL A. MAYO, H. B. MASON, E. L. NEWCOMB, and the Editor-in-Chief of the JOURNAL, General Secretary, Treasurer and Reporter on Progress of Pharmacy, *ex-officio.*

BETTER RECOGNITION AND UTILIZATION OF PHARMACISTS IN THE BRITISH ARMY.

It is gratifying to note that the efforts of the British Pharmaceutical Society have met with a degree of success. England and the United States act along related lines of thought in many things and this may be an encouragement for us. The American Pharmaceutical Association and the National Pharmaceutical Service Association are continuing their efforts for better recognition of pharmacists in the U. S. Army.

Army Council Instruction No. 8 of the British War Office under date of January 3, 1919, reads as follows:

CLASSIFICATION AND EMPLOYMENT OF PHARMACISTS AND DISPENSERS.

1. All pharmacists and their assistants and dispensers serving in the R. A. M. C. will in future be classified as:

(A) *Superintending Pharmacists,* (B) *Pharmacists,* or (C) *Dispensers.*

2. (A) *Superintending Pharmacists* and (B) *Pharmacists* will only include those who are.

(i) Registered as pharmaceutical chemists or chemists and druggists in Great Britain. (Major or Minor qualification of the Pharmaceutical Society of Great Britain.)

(ii) Registered as pharmaceutical chemists in Ireland. (Licentiate of the Pharmaceutical Society of Ireland.)

3. The Officer in charge R. A. M. C. Records will verify the qualifications of each man claiming to be a pharmacist and will make the necessary entry on the soldier's documents accordingly.

4. (C) *Dispensers* will include the following:

(i) Those men who have passed the R. A. M. C. examination as dispenser in accordance with Standing Orders, R. A. M. C.

(ii) Those who hold the diplomas of the Society of Apothecaries of London or of Dublin as apothecaries' assistants.

(iii) Those who are registered as chemists and druggists or as druggists in Ireland.

(iv) Those who have been engaged in dispensing medicines for a period of not less than three years [see par. 5 (iv)].

5. Verification of the qualifications of men to be registered as dispensers will be carried out as follows:

(i) By reference to the entries on attestation papers.

(ii) By production of the certificates issued by the licensing body.

(iii) By reference to the official Register of Chemists and Druggists and of Druggists in Ireland.

(iv) By inspection of testimonials from previous employers, and, if considered necessary, by an oral and practical examination conducted by an officer of the R. A. M. C., assisted by a pharmacist.

6. All pharmacists on being posted to the R. A. M. C. will undergo the usual recruits' training at the R. A. M. C. Reserve Training Centre at Blackpool, and will then be posted to the larger hospitals at home, where they will undergo a two months' course of instruction in the duties of a N. C. O. in charge of a dispensary and in the regimental duties of a N. C. O. of the R. A. M. C.

7. The Officer i/c the hospital to which pharmacists are posted for training will arrange for them to be examined at the termination of their course as to their knowledge of the methods of accountancy in the receipt, issue, and dispensing of medical stores, etc., and as to their capability of undertaking the general duties of a N. C. O., R. A. M. C. He will forward a report of the examination to the D.D.M.S., with a nominal roll of those pharmacists whom he considers in all respects fit for subordinate charge of a dispensary.

The D.D.M.S., if he concurs, will forward the names of those recommended to the Officer i/c R. A. M. C. Records, who will have them registered as superintending pharmacists and cause the necessary entries to be made in their documents. These superintending pharmacists will then be considered as available for the subordinate charge of a dispensary,

and will be posted as required by the D.D.M.S. for the Command or District, or by the D.G.M.S. or D.M.S. of the Force in which they are serving.

8. In the event of a pharmacist being unfavorably reported upon the termination of his training, the Officer i/c the hospital may arrange for his further instruction for a period of two months and re-examination, or he may report that he is unsuitable to be employed as a superintending pharmacist. If he considers, however, that he is suitable for employment in dispensing duties although not capable of subordinate charge, he will submit a report on the matter to the D.D.M.S. for transmission to the Officer i/c R. A. M. C. Records. In this case the soldier will remain recorded as a pharmacist, but he will not be eligible for employment as a "superintending pharmacist."

9. In the event of a pharmacist being considered by the Officer i/c the hospital as quite unfit to be employed in the dispensing of medicines, a special report will be rendered by the latter to the D.D.M.S. for transmission to the W.O.

10. All pharmacists serving in the R. A. M. C. at the present time at home and abroad will, unless they are employed on other specialist duties, be posted to hospitals for instruction and examination, but the period of instruction may be curtailed at the discretion of the Officer i/c the hospital. Reports on each pharmacist should be rendered as in paras. 7, 8 and 9.

11. In all hospitals of 100 beds and over a superintending pharmacist will be placed in subordinate charge of the dispensary, but the other personnel employed therein on dispensing duties may be either pharmacists or dispensers.

12. A dispenser who has, prior to the date of this A. C. I., passed the examination for dispensers in accordance with the Standing Orders, R. A. M. C., will, if otherwise suitable and recommended by the D.D.M.S., be eligible for the subordinate charge of a dispensary.

13. Where the duties of a superintending pharmacist are being carried out at the present time by a female dispenser, and the Officer i/c the hospital is satisfied that the duties are being satisfactorily performed, the present holders of the appointment may be retained.

14. A superintending pharmacist, or N.C.O., R.A.M.C., qualified as in parag. 12, other than a civilian, appointed to the subordinate charge of a dispensary will be granted the acting rank of sergeant with pay while so employed, and in those hospitals where three or more pharmacists or dispensers are employed he will be given the acting rank of staff sergeant with pay.

15. No increase of establishment is authorized by this A. C. I., and these ranks will be included in the total ranks of staff sergeants and sergeants in those units for whom a War Establishment exists.

16. In the case of hospitals for which no War Establishments exist, these ranks will be held supernumerary to those authorized by the Officer i/c R. A. M. C. Records for the company on the strength of which they are borne, but will be included in the total of other ranks authorized for the hospital or other formation in which they are employed.

17. In those cases where the number of hospital beds on the establishment in less than 100, but the dispensing duties for out-patients are sufficiently important to justify the appointment of a superintending pharmacist, the D.D.M.S. of the Command will submit the case for consideration to the W. O. or to the G. O. C.-in-C. of the Force abroad.

18. In the event of there not being sufficient pharmacists available in the Force or Command, application should be made to the Officer i/c R. A. M. C. Records through the usual channels.

19. Superintending pharmacists will only be included in drafts for service overseas when specially ordered by the W. O., but when units are mobilized for service overseas and dispensers are included in the establishment, a superintending pharmacist should invariably be detailed as the senior except in the case of field ambulances, where dispensers only should be posted.

20. Dispensers may be ordered overseas at the discretion of the Officer i/c R. A. M. C. Records.

METHODS OF STERILIZING HYPODERMIC INJECTIONS.

The following list, in tabulated form, was prepared by Lesude and appeared in the *Schweizer Apotheker Zeitung*, and we have rearranged the matter from a reprint in *The Pharmaceutical Journal and Pharmacist* of January 18, 1919, p. 34.

(*a*) Sterilizable in the autoclave at 115° for fifteen to twenty minutes:

Adrenalin, sodium benzoate, brucine sulphate; iron, guaiacol and sodium cacodylates; caffeine; sodium cinnamate; cocaine hydrochloride; salts of codeine; creosote; eucaine; sodium formate; gelatin (twice or thrice); guaiacol; heroine; holocaine; lactic acid; magnesium sulphate, salts of mercury with mineral acids; salts of morphine; novocaine hydrochloride, salts of pilocarpine; salts of quinine; non-phosphatic sera; strychnine sulphate; stovaine.

(*b*) Sterilizable at 100°:

Salts of aconitine; adrenalin; alypin; apomorphine hydrochloride; salts of atropine; brucine; sodium cantharidate; cantharidin; cinnamic acid; colchicine; duboisine sulphate; emetine hydrochloride; galyl; potassium, sodium and iron glycerophosphate; hyoscyamine hydrochloride; ludyl; methylene blue; narceine hydrochloride; nirvanin; salts of physostigmine; quinine cacodylate; scopalamine hydrochloride.

(*c*) Sterilizable by Tyndallization (four to five times at 60° to 70°):

Aristol; chloral; curare; ergotinine; hectine; hectargyre; lecithin; sodium nucleinate; oils.

(*d*) Sterilizable by filtration through a Chamberland filter:

Calcium glycerophosphate, organic extracts isotonic salt solution; therapeutic sera; tuberculin; vaccine; mineral waters; yeast.

(*e*) To be prepared with aseptic precautions:

Crystalline aconitine; arsacetin; collargol; cholesterin; all colloids; cryogenin; crystalline digitalin; electrargol and all electric colloids; ichthyol; most mercury salts with organic acids; medicated oils; protargol; salvarsan; neosalvarsan.

BENZYL ALCOHOL AS A LOCAL ANAESTHETIC.

The application of benzyl alcohol, phenmethylol, as an anaesthetic is credited to Dr. David L. Macht, of the Pharmacological Department of Johns Hopkins University. It is reported to be very much less toxic than cocaine and possesses the advantage of being without some of the unpleasant reactions peculiar to cocaine.

According to press reports the local anaesthetic properties of benzyl alcohol were accidentally revealed to Dr. Macht while he was experimenting with benzyl benzoate. He happened to taste a minute particle of the benzyl alcohol and found that his tongue had become completely anaesthetized. There was a slight irritability and this was followed by a sensation of numbness, coolness and hardness, very much like that caused by a cocaine solution. A series of careful experiments followed and the anaesthetic properties of the benzyl alcohol were amply established. The results were so satisfactory, in fact, that the use of the chemical was commenced at the Johns Hopkins Hospital. The discovery came at an opportune time last spring, when the supply both of cocaine and novocaine was short and prices had been sent to unprecedented figures by the government demand for war uses.

NARCOTIC "MUSTS" ISSUED TO THE NEW YORK DRUG TRADE.

Commissioner Frank Richardson has obtained suggestions relative to enforcement of the New York Narcotic Law, and after analysis of them has prepared a summary which has been mailed to New York druggists. They follow:

An apothecary is compelled:

1. To register with the Department of Narcotic Drug Control before he can purchase, possess, sell, distribute, or dispense cocaine, opium or its derivatives.

2. To use official triplicate order forms in purchasing narcotic drugs.

3. To require from the physician an order on an official order form before furnishing narcotic drugs. He cannot accept in lieu of the order form the physician's official or unofficial prescription blank.

4. To keep a separate file of unofficial prescriptions for cocaine or opium or its derivatives for a period of two years.

5. When filling prescriptions on official triplicate prescription blanks to indorse on the face of the original and the duplicate—the date of filling, file number, his name and business address, and name of the person to whom delivered, if other than the person for whom the prescription was issued, and keep one duplicate on file for two years and mail the other to this department within twenty-four hours from date of filling.

An apothecary cannot:

6. Fill a prescription written on official triplicate prescription blanks later than four days from date of issue.

7. Sell hypodermic syringes or needles to any person other than a dealer in surgical instruments, apothecary, physician, dentist,

or veterinarian, except on the written order of a physician.

In all cases of apparent conflict with the Harrison law, the Federal law takes precedence.

The commission also has summarized the law for the benefit of physicians and will send copies to every doctor in New York.

COMMITTEE NAMED TO PLAN DRUG RESEARCH INSTITUTE.

Dr. William H. Nichols, president of the American Chemical Society, has announced the appointment of a committee on an estimate of cost and an outline of policies for the proposed National Institute of Drug Research. The committee consists of prominent chemists, biologists and pharmacologists and also representatives of the large interest, in manufacturing pharmacy, and includes specialists who are peculiarly fitted to cope with present-day problems relating to intoxicants and the dangers of drug addiction. Its personnel is as follows:

Dr. John J. Abel, pharmacologist, former president of the American Society for Pharmacology and Experimental Therapeutics, professor of pharmacology at Johns Hopkins Medical School, discoverer of the substance now known as adrenalin and an investigator of the action of alcohol on the body, Baltimore, Md.

Dr. Raymond F. Bacon, director of the Mellon Institute for Industrial Research, University of Pittsburgh, in charge of important researches on bread, fruit juices, coffee, and many lines of industrial chemistry, Pittsburgh, Pa.

Dr. Frank R. Eldred, chief of the scientific department of a prominent firm of manufacturing pharmacists and formerly chairman of the pharmaceutical division of the American Chemical Society, Indianapolis, Ind.

Dr. Charles H. Herty, chairman; editor of the *Journal of Industrial and Engineering Chemistry*, and former president of the American Chemical Society, New York City.

Dr. Reid Hunt, pharmacologist, president of the American Society for Pharmacology and Experimental Therapeutics, professor of pharmacology in the medical department of Harvard University, a noted authority on the effects of poisons and alcohol upon the human body, Cambridge, Mass.

Dr. Treat B. Johnson, professor of organic chemistry, Sheffield Scientific School, Yale University, and specialist on compounds occurring in the human body, for which work he was awarded last year the Nichols medal for preëminence in research, New Haven, Conn.

Dr. P. A. Levene, chief of the department of biological chemistry, Rockefeller Institute for Medical Research, and an expert on proteins and enzymes and the chemistry of nutrition, New York City.

Mr. F. O. Taylor, chairman of the pharmaceutical division, American Chemical Society, specialist in the manufacture of drugs, Detroit, Mich.

Dr. Herty in a recent address before the New York Academy of Sciences outlined a tentative plan of the institute, the organization of which has been considered on a basis of $10,000,000. The object of the institute will be to make a thorough study of the effect of various medicinal substances upon the human organism, to suggest greater means for curing the ills of mankind and to prevent the abuse of drugs through gaining a wider knowledge of their physiological effects.—*Paint, Oil and Drug Reporter.*

PROPOSED FLORA OF THE PHILIPPINES.

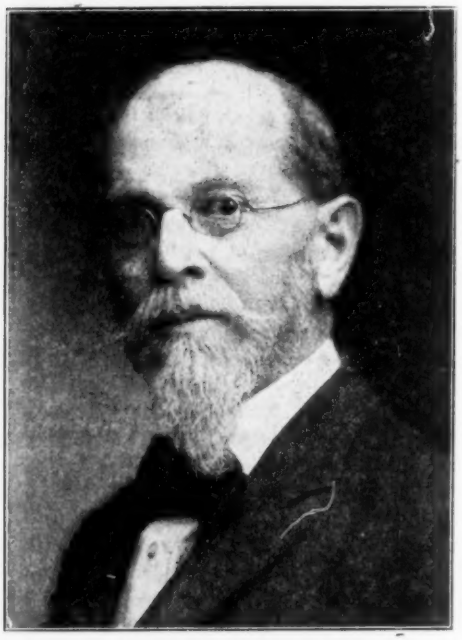
The Philippine Bureau of Science is planning to start the preparation of a new dictionary of plant names of the Philippine Islands and a critical enumeration of all known species in the islands, with an adjustment of the synonymy, in preparation for the final undertaking, a general flora of the Philippines. It may be possible to combine the Filipino names with the systematic enumeration, thus making a single publication that will include all the technical and local names credited to every plant in the Philippines.

OBITUARY.

JAMES OSCAR BURGE.

J. O. Burge, honorary president of the American Pharmaceutical Association, 1916–1917, died at his home in Nashville, February 6, 1919. He joined the American Pharmaceutical Association in 1878 and during all these years was an untiring worker for its interests. The meeting of this organization convened in Nashville in 1913, and it was largely due to the efforts of Mr. Burge that

this city was selected. He served as local secretary, and how well he performed the duties is still remembered by the greater number of those in attendance. He was secretary of the Section on Commercial Interests from 1893–1895, at one time a member of the Council, and for years of important committees. His great interest was in the work of the Membership Committee and a large percentage of the A. Ph. A. members from the southwest were brought into the Association through his efforts.



JAMES OSCAR BURGE

In Tennessee he contributed largely to the success of the State Association meetings; by this body he was honored with nearly every office and seldom, if ever, failed to attend the annual conventions. He ever exhibited an interest for pharmacy and was instrumental in the establishment of the Nashville Branch, A. Ph. A., of which he was for a number of years the presiding officer.

The following is reprinted from the Nashville *Banner* of February 7, 1919:

"The death of J. O. Burge, which occurred at his home, 1502 McGavock, February 6th, is a distinct loss to the business, social and religious life of Nashville. He was gentle, kind and considerate in all his relations with his fellow-men. He was a good friend, a good neighbor, a good Christian, an ideal citizen and one who was strongly drawn by home ties. The latter exemplified one of the finest traits of his character.

"For many years he had been closely associated with the drug trade, and if any druggist in the state were asked who is the best known man in the pharmaceutical profession in the state the name that would at once suggest itself is that of J. O. Burge, of Nashville.

"James Oscar Burge was born near Bowling Green, Ky., March 27, 1848, and was in his 71st year at the time of his death. He graduated from the Philadelphia College of Pharmacy in 1876 and received high commendation from the faculty. Prior to his graduation from the College of Pharmacy he had had ten years' practical experience in the business.

"For a number of years he was in the drug business at Franklin and Bowling Green, Ky., and in 1880 came to Nashville and organized the firm of Burge & Matthews. In 1882 he sold his interest to his partner, and returned to Bowling Green, where he still owned a store. In 1885 he returned to Nashville as the head of the firm of Burge & Rascoe, corner of Broad and Market Sts. After he had severed his connection with this firm he conducted drug stores at the corner of Fifth and Woodland Sts., Union and Cherry Sts. and various other locations in Nashville, and his name is more closely associated with the drug trade of Nashville than that of any other man. Until about a year ago he was acting as chemist for Berry, DeMoville & Co., wholesale druggists, but resigned this position to take an active part in the management of the Wharton Chemical Company and the Gattis Chemical Company, which he had organized in connection with his son, J. O. Burge, Jr.

"In 1877 he married Miss Nannie B. Hill, of Nashville, who survives him. Also surviving him are two sons, Edward E., of the claim department of the N. C. & St. L. railway, and J. C., Jr., of the Ford Tobacco Works, the Wharton Chemical Company and the Gattis Chemical Company. He was a member of the Edgefield Baptist Church.

SOCIETIES AND COLLEGES.

MEETING OF AMERIGAN DRUG MANUFACTURERS ASSOCIATION

The Executive Committee of the American Drug Manufacturers Association met recently and completed arrangements for the Eighth Annual Meeting of that organization. The Waldorf-Astoria, New York City, will be the place, as in the past, and the dates will be March 24, 25, 26 and 27. Owing to the increase in the activities of the Association, the convention will be a four-day instead of the three-day affair of bygone years. The 24th will be given over to the Committee on Standards and Deterioration, the morning of the 25th to the Biological Section, and the regular sessions of the Association as a whole will start on the afternoon of the 25th, when the delegates of allied associations will be received.

The convention this year will be featured by many innovations, notably a series of roundtables for the discussion of such problems as fire insurance, returned goods, credit matters, elimination of monthly statements, etc., and a debate by authorities of nation-wide reputation on the much mooted question of trade acceptances, as applied specifically to drug manufacturers. Dr. Chas. H. Herty will speak on the Proposed National Institute for Drug Research which will also be one of the principal subjects of general discussion.

Of particular interest to the trade generally will be the consideration which will be given the problem of the future of alcoholic medicinal preparations. Those of foresight in the drug trade recognize that with national prohibition upon us these preparations will become the subject of regulation in practically every state and, in many cases, of regulations so drastic as to seriously embarrass their legitimate manufacture and sale.

THIRTY-FIFTH ANNUAL MEETING OF MINNESOTA STATE PHARMACEUTICAL ASSOCIATION.

The thirty-fifth annual meeting of the Minnesota State Pharmaceutical Association was held in St. Paul, February 24–26, 1919. An open discussion on the problems of the retail druggist was of general interest and also the topic of "National Legislation" presented by Secretary S. C. Henry, of the N. A. R. D. The program of the Scientific Section announced the following titles of papers and addresses:

An Address—"Reconstruction Problems in Pharmacy," presented by request of the, officers of the association by Dr. C. B. Jordan, President of the American Conference of Pharmaceutical Faculties, and Dean of School of Pharmacy, Purdue University, LaFayette, Ind.

"War Experiences of a Pharmacist," by Lieutenant Cleve Backman, Rushford, Minn.

"Participation by Pharmacists in General Health Problems," Dr. H. M. Bracken, Executive Officer, State Board of Health.

"The Pharmacists Coöperation in the Suppression of Venereal Diseases," by Dr. Irvine, of the State Board of Health.

"Upward Pharmacy," by Miss Marie A. Piesinger, New Prague.

Report, Committee on Adulteration, by Prof. Gustav Bachman, Chairman.

"The Therapeutic Value of Digitalis Leaves Collected at Different Seasons of the Year," by E. L. Newcomb, Minneapolis.

"Alcohol Determination Methods," by Prof. Chas. H. Rogers, Minneapolis.

"Old Time Pharmacy, Including an Exhibit of Old and Rare Pharmaceutical Volumes" by G. J. DeMars, Fertile, Minn.

"Pharmacy and the Druggist," by L. J. Aberwald, St. Paul.

"Pharmacy an Essential Speciality," by Dr. Henry Kraemer, College of Pharmacy, University of Michigan, Ann Arbor, Mich.

"The Advent of Pharmacy into St. Paul," by H. W. Rietzke, St. Paul.

"Some Remarks on Pharmacy in the Army," by Lieutenant Joseph Vadheim, Tyler, Minn.

Dean Frederick J. Wulling, besides presiding over these sessions, was named on the program as a contributor of a paper and also Charles McGregor, of the Minnesota Board of Pharmacy.

The Northwestern Branch, A. Ph. A., met jointly with this section and following its adjournment elected officers for the ensuing year.

THE PHARMACIST AND THE LAW.

USE OF ALCOHOL IN MEDICINALS.

The Commissioner of Internal Revenue has recently issued regulations for the sale of alcoholics. Preparations, such as elixirs, etc., of the U. S. P. and N. F., that are used largely as vehicles must bear a statement as follows:

"This preparation has been made with non-beverage alcohol, and the sale or use thereof for beverage purposes will render the vendor or user liable to severe penalties."

All persons are forbidden to sell or deliver distilled spirits or wines for use or sale for other than beverage purposes, to any person, firm or corporation not qualified as a user or dealer as herein required (the permit to sell) and then only upon delivery of the person so qualified an application therefor in due form.

The Regulations:

If an alcoholic compound is already listed in T. D. 2544, or subsequent decisions of similar purport as one requiring special tax for its manufacture and sale, permit shall not be issued, nor will permits be issued to retail liquor dealers except pharmacists, as hereinafter provided.

Where the manufacturer desires to make United States Pharmacopoeia or National Formulary products, the permit may be approved by the collector of internal revenue without submitting the matter to this office, and as to such products a statement of the names by classes, such as "tinctures," "extracts," etc., and that they conform to the standards above specified will be sufficient without any further description or statement of formula.

In the case of alcoholic medicinal compounds which are not in conformity with the United States Pharmacopoeia or National Formulary, the manufacturer will file with the collector, when requesting a permit for the use of non-beverage alcohol or non-beverage wines, the following data in duplicate: The name of the preparation, by whom manufactured, for whom manufactured in cases where same is not placed on the market by the manufacturer, the advertising matter distributed with the preparation, and the percentage of alcohol by volume contained in the finished product.

A sworn statement, in duplicate, must be furnished that the medicinal compound contains no more alcohol than is necessary for the purposes of extraction, solution or preservation; that it contains in each fluidounce a dose as a whole or in compatible combination of one or more agents of recognized therapeutic value; that it contains no agents either chemically or physiologically incompatible with the active medicinal agents upon which the medicinal claims are based, and that it is not a beverage and is not to be sold or used as a beverage. The Commissioner of Internal Revenue reserves the right, when in doubt as to the non-beverage character of the preparation (and the applicant must accept such reservation), to demand at any time the formula and process by which the article is manufactured. The collector immediately after issuing the permit will forward one copy of the data above specified to this office for filing in the Division of Chemistry, retaining one copy for his files.

Where the collector is in doubt as to whether or not the medicinal compound is a beverage, he will issue the permit and submit the entire matter to the Commissioner of Internal Revenue with a commercial package or packages of not less than 16 ounces of the product for determination.

Homeopathic pharmacists, in order to obtain and use non-beverage alcohol in the manufacture of potencies, attenuations or dilutions, or sell the same, are required to make application and obtain permit and give the required bond in the same manner as any other user or dealer in non-beverage alcohol. Such pharmacists in order to obtain and use non-beverage alcohol, must, under all circumstances, qualify by filing bond and obtaining permit regardless of the manufacture and sale of the dilutions.

Any physicians or other person desiring to purchase or use such attenuations, potencies or dilutions or the non-beverage alcohol for making the same, must likewise qualify by filing bond and obtaining permit, except that a Homeopathic physician or any other person may obtain from the pharmacist not exceeding two drachms of any attenuation, potency or dilution at one time without filing bond and obtaining permit. A physician may dispense these attenuations, potencies or dilutions in quantities ordinarily prescribed to patients, and such patients need not file bonds or hold permits. Homeopathic physicians and pharmacists who are unwilling to take out permits and give the required bonds may, prior to June 30, 1919, purchase and use beverage spirits produced from materials fermented

prior to 11 o'clock P.M., September 8, 1917, and tax paid at the beverage rate.

The ruling contained herein as to the use and sale and the right to manufacture such dilutions, potencies or attenuations, places the Homeopathic pharmacist, or physician and user of the dilutions, potencies or attenuations in practically the same position as pharmacists and physicians of other schools. Any person claiming the right to use non-beverage alcohol must establish his right by complying with the laws pertaining to the same and the regulations issued in pursuance thereof.

Non-beverage alcohol and non-beverage wine may be used in the manufacture of bona fide flavoring extracts for culinary purposes and soft drinks where such extracts are manufactured in accordance with the standards prescribed in the U. S. P. and N. F. and by the Secretary of Agriculture. Where not manufactured in accordance with such standards the sworn data and samples required herein as to alcoholic and medicinal compounds will be required. (See Art. 8, d and e.)

Pharmacists who are holders of special tax stamps as dealers will be entitled to use or sell alcohol or wines for other than beverage purposes, but they will be required to obtain permit, give bond, and make application as herein prescribed.

Pharmacists who hold permit and have given bond will be permitted to sell non-beverage alcohol in a quantity not exceeding one pint, without a physician's prescription, to persons who do not hold permits and who have not given bonds, but not in advance of orders, provided they first medicate the same in accordance with any one of the formulas recited hereafter:

(1) Carbolic acid 1 part, alcohol 99 parts.

(2) Formaldehyde 1 part, alcohol 250 parts.

(3) Bichloride of mercury 1 part, alcohol 2,000 parts.

(4) Bichloride of mercury 0.8 gramme, hydrochloric acid 60 Cc., alcohol 640 Cc., water 300 Cc.

(5) Bichloride of mercury 1 1/2 grains, hydrochloric acid 2 drachms, alcohol 4 ounces.

(6) Formaldehyde 2 parts, glycerine 2 parts, alcohol 96 parts.

(7) Carbolic acid 1 drachm, tannic acid 1 drachm, alcohol 1 pint, water 1 pint.

(8) Alum 1/2 ounce, formaldehyde 2 drachms, camphor 1 ounce, alcohol and water, each 1 pint.

(9) Liquor Cresolis Comp. (U. S. P.), 10 Cc., alcohol 1,000 Cc.

When medicated as herein provided, the alcohol will be regarded as having lost its identity as such and when thus medicated and sold in good faith for rubbing purposes, special tax liability will not be incurred.

The container of such alcohol will bear a "Poison" label.

Any abuse of these privileges will, however, result in recall of the pharmacist's permit and its cancellation.

Attention is hereby called to the fact that non-beverage alcohol cannot be dispensed to persons who do not hold permits, whether upon physician's prescription, or otherwise, except in a quantity of one pint or less, and on condition that the alcohol is first medicated according to one of the 9 formulas set forth herein.

The so-called non-beverage spirits and non-beverage wines must not be dispensed on a physician's prescription, unless in the compounding thereof the same are so medicated as to render them absolutely unfit for use as a beverage. In case of prescription compounding, the druggist will be held absolutely responsible as to the sufficiency of the medication.

Manufacturers of extract of Jamaica ginger will not be issued permits covering the use of non-beverage alcohol in the manufacture thereof unless the same is made in accordance with the process prescribed in the United States Pharmacopoeia. Manufacturers of alcoholic preparations which it is possible to use internally, such as flavoring extracts, must, wherever standard process of manufacture is prescribed by the Secretary of Agriculture, use such process.

Where the same person, firm, or corporation is operating a number of drug stores in the same city, the withdrawal or purchase for sale or use of alcohol and wine for non-beverage purposes at all of these stores may be covered by a single bond, permit, and serial number. The bond in such case must be in sufficient amount to cover the operation at all the different stores, and the name and location of each store where sales are to be made must be stated in the appropriate spaces in the bond. The original permit will be posted at the main store, and a copy of the same must be posted at each of the other stores with a notation in the margin thereof setting forth the fact that the original is posted at the main store, giving the street address where the same is located.

NARCOTIC LAW AND RULINGS.

By the terms of Section 1006 the Harrison Law is amended to require every person who manufactures, imports, produces, compounds, sells, deals in, dispenses or gives away opium, or coca leaves or any of the salts, derivatives, compounds or preparations thereof, to register with the collector of Internal Revenue in his district *within thirty days after the passage of the act* and annually thereafter on or before July 1st. All persons, firms or corporations who engage in such business subsequent to the passage of the Act, shall register in a like manner.

Registration must be accompanied by the payment of a special license tax as follows: Importers, manufacturers, producers or compounders, $24.00 per annum; wholesale dealers, $12.00 per annum; retail dealers, $6.00 per annum; physicians, dentists, veterinaries, $3.00 per annum. These taxes are to be in lieu of the present fee of $1.00.

By the terms of the bill a manufacturer is deemed to be any person "who imports, manufactures, compounds or otherwise produces for sale or distribution any of the aforesaid drugs."

A stamp tax of one cent for each ounce or fraction thereof is to be levied upon all opium, coca leaves, any compound, salt, derivative, or preparation thereof and it shall be unlawful to purchase, sell, dispense or distribute any of the aforesaid drugs, compounds, or preparations except in the original stamped packages or from the original stamped package, except on prescription of a duly registered physician, dentist or veterinary, in which case a label bearing the name and registry number of the druggist, serial number of prescription, name and address of patient, and name, address and registry number of the person writing the prescription.

Section 1007 provides that a record shall be kept of all sales of articles formerly exempted from the provisions of the Harrison Anti-Narcotic law. This section amends Section 6 of the Harrison law, making it read as follows, the new matter as prepared by the Conference Committee being in italics:

"Sec. 6. That the provisions of this act shall not be construed to apply to the *manufacture*, sale, distribution, giving away, dispensing, or possession of preparations and remedies which do not contain more than two grains of opium, or more than one-fourth of a grain of morphine, or more than one-eighth of a grain of heroin, or more than one grain of codeine, or any salt or derivative of any of them in one fluidounce, or, if a solid or semi-solid preparation, in one avoirdupois ounce; or to liniments, ointments, or other preparations which are prepared for external use only, except liniments, ointments, and other preparations which contain cocaine or any of its salts or alpha or beta eucaine or any of their salts or any synthetic substitute for them: Provided, that such remedies and preparations are *manufactured*, sold, distributed, given away, dispensed, or possessed as medicines and not for the purpose of evading the intentions and provisions of this act; *Provided further, that any manufacturer, producer, compounder, or vendor (including dispensing physicians) of the preparations and remedies mentioned in this section shall keep a record of all sales, exchanges, or gifts of such preparations and remedies in such manner as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall direct. Such record shall be preserved for a period of two years in such a way as to be readily accessible to inspection by any officer, agent, or employee of the Treasury Department duly authorized for that purpose, and the State, Territorial, district, municipal, and insular officers named in section 5 of this act, and every such person so possessing or disposing of such preparations and remedies shall register as required in section 1 of this act and, if he is not paying a tax under this Act, he shall pay a special tax of $1 for each year, or fractional part thereof, in which he is engaged in such occupation, to the Collector of Internal Revenue of the district in which he carries on such occupation as provided in this Act. The provisions of this Act as amended shall not apply to decocainized coca leaves or preparations made therefrom, or to other preparations of coca leaves which do not contain cocaine.*"

According to James F. Finneran, N. A R. D. *Journal*, Commissioner B. C. Keith has ruled as follows:

"An ointment containing either nutgall or nutgall and opium in a quantity sufficient to make an ounce is not considered a preparation coming within the exemption of Section 6 of the Harrison Act, even though the prescription calling for such preparation is marked 'For external use only,' as such preparations are not sufficiently denatured to prevent their use internally.

"A prescription calling for one ounce

Bell's syrup of codeine, one ounce paregoric, and two ounces syrup of wild cherry, is a narcotic prescription, and must be prepared in accordance with regulations; that is, must bear the name and address of the patient, the date, the name and address of the physician and his registry number, and such a prescription cannot be refilled (see T. D. 2309, dated March 11, 1916).

"A prescription for an ordinary cough syrup containing paregoric and no other narcotic preparation is exempt under Section 6, and can be refilled (see T. D. 2309)."

SECTIONS FROM THE NEW WAR REVENUE BILL.

SOFT DRINKS.

Section 628 provides a tax of fifteen per cent on all beverages containing less than one-half of one percent of alcohol. The same section imposes a ten percent tax upon all unfermented grape juice, ginger ale, root beer, sarsaparilla, pop, artificial mineral waters (carbonated or not carbonated), other carbonated waters or beverages, and soft drinks including fruit or berry juices sold in bottles or other containers. This section also imposes a tax of two cents per gallon upon all natural mineral waters or table waters sold by the producer, bottler or importer thereof in bottles or other closed containers, provided the sale price is over ten cents per gallon.

Section 629 provides that the taxes enumerated in section 628 shall be paid by the manufacturer, bottler, producer or importer, who shall be required to make monthly returns and if the tax is not paid when due, a penalty of five percent is imposed in addition to a charge of interest at the rate of one percent for each full month from the time when the tax becomes due. Sections 628 and 629 become effective May 1, 1919.

Section 630 provides that on and after May 1, 1919, a tax of one cent for each ten cents or fraction thereof of the price be paid by the consumer of soda water, ice cream, ice cream sodas, sundaes, etc. This tax is to be paid by the consumer at the time of purchase.

PROPRIETARY GOODS.

Section 907 imposes a consumption tax of one cent for each twenty-five cents of the retail price of proprietary medicines, toilet articles, cosmetics, etc. This section as passed by the Senate noted that medicinal preparations which are not advertised to the lay public were to be exempted from the tax. This exemption clause has been modified and now reads as follows:

Provided, That the provisions of this section shall not apply to the sale of vaccines and bacterines which are not advertised to the general lay public, nor to the sale by a physician in personal attendance upon a patient of medicinal preparations not so advertised.

The taxes imposed by this section shall be collected by whichever of the following methods the Commissioner may deem expedient: (1) By stamp affixed to such article by the vendor, the cost of which shall be reimbursed to the vendor by the purchaser; or (2) by payment to the vendor by the purchaser at the time of the sale, the taxes so collected being returned and paid to the United States by such vendor in the same manner as provided in section 502.

This section, 502, provides for making monthly returns to the collector of Internal Revenue in accordance with the regulations of the Commissioner.

Section 907 becomes effective May 1, 1919

BOOK NOTICE.

A Compend of Pharmacy. By F. E. Stewart, M.D., Ph.G., Phar.D., revised by Heber W. Youngken, Ph.G., Ph.D. Published by P. Blakiston's Son & Co., Philadelphia. Price, $1.50.

This is one of "Blakiston's Quiz Compends." The Reviser states that "the object of the author of this Compend is to present information concerning official products and preparations in such clear, concise and condensed form as to be of especial service to the student in memorizing it." And further, "But it is not the purpose of the author to place in the hands of students or drug clerks desiring to pass examining boards a book to serve for 'cramming.' The work will be found of great value for use in the regular educational course, just the same as a 'quiz' would be, but it is not intended, neither is it adapted, for conducting students 'across lots.' There is but one way to obtain a practical education, and that is by careful, systematic study and practical experience."

The authors have indicated the contents of the book by the quotations given. In the present revision the drugs and preparations of the National Formulary are also considered. There is a demand for books of this kind and in the preparation of this Compend due consideration has been given to its purposes, as outlined by the authors.

CHANGES OF ADDRESS.

All changes of address of members should be sent to the General Secretary promptly.

The Association will not be responsible for non-delivery of the Annual Volume or Year Book, or of the JOURNAL unless notice of the change of address is received before shipment or mailing.

Both the old and the new address should be given thus:

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To 278 Dartmouth St., Boston, Mass.

Titles or degrees to be used in publications or in the official records should be given, and names should be *plainly* written or typewritten.

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COLLINS, GEO. W.
From Box 66, Mt. Vernon, Ill.
To 507 S. Division St., Ann Arbor, Mich.

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To East Auburn, Cal.

SCHETTLER, GEO. M.
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To 55 W. Fort St., Detroit, Mich.

SEELEY, M. J.
From Science Hall, Corvallis, Ore.
To 381 Passaic Ave., Nutley, N. J.

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To 303 Columbia Terrace, Peoria, Ill.

SPEASE, ED.
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To 244 Murry St., Elizabeth, N. J.

TWOMBLY, A. P.
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To Box 94, N. Rochester, N. H.

WINN, H. A.
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To 51 Somerset Ave., Winthrop, Mass.

MANSFIELD, WM.
From Albany, N. Y.
To 36 Hollywood St., E. Orange, N. J.

GOHEEN, I. L. SGT. 1ST CLASS
From Field Hosp. 139–110 S. T. Camp, Donaphan, Ft. Sill, Okla.
To Field Hosp. 139–110 S. T. Camp, A. E. F.

BRADT, F. J.
From 339 Vinewood Ave., Detroit, Mich.
To 302 Maidstone Ave., Detroit, Mich.

BIENSTOCK, S.
From Broadway St., Hartford, Conn.
To 990 Broad St., Hartford, Conn.

DELGADO, E.
From Prineipe 19 Havana, Cuba.
To San Nicholas 245, Havana, Cuba.

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To 39 S 10th St., Philadelphia, Pa.

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To 570 W. Madison, Chicago, Ill.

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To 40 Harvard Ave., Collingswood, N. J.

HENSEL, S. T.
From 351 Mercantile Bldg., Denver, Colo.
To 315 Mercantile Bldg., Denver, Colo.

TURNER, J. L.
From 281 Greene Ave., Brooklyn, N. Y.
To 1398 Metropolitan Ave., Brooklyn, N. Y.

MORGAN, WM. F.
From 136 Meserole Ave., Brooklyn, N. Y.
To Silver Lake Pharmacy, Baldwin, L. I., N. Y.

TAKAMINE, J.
From 120 Broadway, N. Y., N. Y.
To Clifton, N. J.

NOVACK, H. J. DR.
From 3131 Norris St., Philadelphia, Pa.
To N. E. Cor. 32nd and Diamond St., Philadelphia, Pa.

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From 65 Peachtree, Atlanta, Ga.
To No. 10 Auburn Ave., Atlanta, Ga.

BUTTERY, L. L.
From Gonzales, Texas.
To cr Central Drug Store, San Angelo, Texas.

DONIGER, S.
From 79 Sherman Ave., N. Y., N. Y.
To Residence unknown.

ARNOLD, H. C.
From 173 E. 85th St., N. Y., N. Y.
To P. O. Box 71, Berlin, N. H.

ANDERSON, A. E.
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To 1162 13th Ave., Moline, Ill.

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From Residence unknown.
To 1335 N. Caroline St., Baltimore, Md.

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To 320 Hart Ave., Brooklyn, N. Y.

HARGREAVES, C. C.
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To Apt. 505, 430 Mass Ave., Indianapolis, Ind.

NANKIVELL, J. H.
From 157 Inf. A. E. F., N. Y.
To 157 Inf., 4158 So. Williams St., Denver, Colo.

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To 851 1st Ave. N., St. Petersburg, Fla.

THURSTON, E. W.
From 4003 N. Griffin Ave., Los Angeles, Cal.
To 4144 Carrollton Ave., Indianapolis, Ind.

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From 126 Willet St., Jamaica, N. Y.
To 34 S 17th St., Philadelphia, Pa.

RABINOWITZ, H.
From 364 E-4, N. Y., N. Y.
To 353 Vernon Ave., Brooklyn, N. Y.

RODRIGUEZA, RENE.
From Sarin Hall, Notre Dame, Ind.
To Separacion 113 Sante Domingo City, Dominican, Rep.

HIRSCHER, A. M.
From 1807 4th St., Minneapolis, Minn.
To Janesville, Minn.

POTTER, J. S.
From 65 Hillside Ave., Hillside, N. Y.
To 1254 Salem Ave., Hillside, N. Y.

KOSSLER, H. S.
From 444 S. Main St., Pittsburgh, Pa.
To 206 S. Main., Pittsburgh, Pa.

LIPSCOMB, W. L.
From Brownsville, Tenn.
To Dyersburg, Tenn.

CERMAK, F. J.
From 18501 Detroit Ave., Cleveland, Ohio.
To 3501 E. 93rd St., Cleveland, Ohio.

MEEKER, G. H.
From Media, Pa.
To School of Med., Univ. of Pa., Phila., Pa., cr Dr. S. Egbert.

PARIS, J. E.
From Golconda, Ill.
To Paragould, Ark.

TYLER, E. A.
From Rahway, N. J.
To 244 Murray St., Elizabeth, N. J.

WILDMAN, E. A.
From 620 E St., Indianapolis, Ind.
To 2923 Washington Bld., Indianapolis, Ind.

DEAN, J. A.
From 5420 Baltimore Ave., Philadelphia, Pa.
To 614 S. 48th St., Philadelphia, Pa.

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To 3rd and Cedar St., St. Louis, Mo., cr J. T. Milliken.

CHEATHAM, W. B.
From 781 Alcatraz Ave., Oakland, Cal.
To 145 Nassau St., N. Y., N. Y., cr Associated Pharmacist.

KOCH, E. W.
From 2257 N. Ill. St., Buffalo, N. Y.
To Univ. of Buffalo, Medical Department, Buffalo, N. Y.

VARGAS, JORGE
From 1120 Boylston Ave., Boston, Mass.
To 19 Shailer St., Coolidge Cor., Brookline, Mass.

SEYBERT, J. E.
From Indianapolis, Ind., cr Eli Lily & Co.
To 304 Kenmore Road, Indianapolis, Ind.

BREWER, J. E.
From 1541 Arch St., Norristown, Pa.
To 215 Summit St., Norristown, Pa.

CARDARELLI, E. J.
From 99 Wilson St., Brooklyn, N. Y.
To 34 West Union Ave., Bound Brook, N. J.

DECEASED SINCE JANUARY 1, 1919.

MARTIN, J. F.
Bourbon, Ind.

BLOCK, MITCHELL
Excelsior Springs, Mo.

HANEY, E. R.
666 North 57th St., Philadelphia, Pa.

CORRESPONDENCE

SOLDIER AND SAILOR PHARMACISTS

CINCINNATI, OHIO, January 31, 1919.

TO THE MEMBERS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION:

Doubtless you have heard about the work of this Committee. It is first of all an A. Ph. A. Committee, engaged in a service to the young men who have been called out of Pharmacy by their country, many of whom must look for new positions and new openings when they return to civil life. While it is our primary mission to help in re-establishing the returning soldier and sailor pharmacists, we are thus at the same time serving the cause of American pharmacy.

We have undertaken an enormous task, the scope of which can hardly be realized by those who are not directly engaged in it. What real need is there for the work which this Committee has undertaken? Frankly, we do not know how many of the more than ten thousand pharmacists and drug clerks, most of whom are still in the service, will be in need of help to become re-established, but we do know that it is our mission to find out, and we do know that it is too late to undertake helping them when they are all back, and when possibly a good part may not know where to turn. When the last half of the men return, those men who have been longest in service, who have been subjected to the greatest hardships, then particularly will American pharmacy be called on to show what it can do. Let us hope that not a single American pharmacist who is in the service will find difficulty in becoming re-established, but let us be ready to help, if necessary.

Many of the A. Ph. A. members have already filled out and returned their report card. Some of the members have aided by contributing toward our Expense Fund, and we accept this opportunity to thank them. The Committee has been greatly hindered because of the lack of ample funds. The scope of our work necessarily has been controlled by such lack and our ultimate, complete success is absolutely dependent upon having sufficient funds. The work must be systematically arranged, and must be systematically carried on, and a clerical force is necessary for that purpose. We are assured now that we have undertaken a worth-while cause, but the complete and creditable success of our work will depend largely upon sufficient financial assistance to assure thoroughness. We maintain that American pharmacy can take care of its own, and we ask you to help prove it, if we are called upon to do so.

THE A. PH. A. ADVISORY COMMITTEE FOR SOLDIER AND SAILOR PHARMACISTS.

(Signed) FRANK H. FREERICKS, *Chairman*.

THE PRESCRIBING AND SALE OF REMEDIES FOR VENEREAL DISEASES.

PITTSBURGH, PA., February 10, 1919.

THE EDITOR:

Your Editorial Note* on "Venereal Diseases" in January issue records complaints on the part of the medical profession on the loss of profitable clientele. This is so contrary to the usual attitude of said profession in the past that one wonders if it, like the Germans of old, has undergone a regeneration.

It appears to me that if the Government's object is to be successful, treatment of this class of diseases must be properly regulated, and the establishment of maximum fees to be charged will prove no small factor towards its accomplishment. In the past patients of this class of diseases frequently have been victims of malpractice as well as robbery.

Pharmacists are asked to discontinue the sale of medicines purporting to cure venereal diseases, would it not be well for Surgeon-General Blue to help them act the good Samaritan by furnishing the following data in zones of, say, one hundred miles' radius?

1. A list of physicians who are competent to treat venereal diseases.
2. A list of physicians who made pledge to treat these diseases according to Government rules and the fee charged for treating same.
3. A copy of the state law controlling the treatment of venereal diseases.
4. A supply of literature for customers applying for medicine for the cure of said diseases.
5. Location of approved clinics.

(Signed) LOUIS EMANUEL.

* January issue JOURNAL A. PH. A., p. 78.